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GenCore version 5.1.3
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OM protein - protein search, using sw model

2002, 15:52:06 October 25, Run on:

; Search time 25.1807 Seconds (without alignments) 485.217 Million cell updates/sec

US-09-852-261-2

Perfect score:

598 1 GPETLCGAELVDALQFVCGD.....STNKNTKSQRRKGSTFEEHK 110 Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

747574 segs, 111073796 residues rched:

Total number of hits satisfying chosen parameters:

seq length: 0 seq length: 2000000000 Minimum DB Maximum DB

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

A_Geneseq_032802:*

1: SIDSI/gcgdata/geneseq/geneseqp-embl/AA1980.DAT:*
2: SIDSI/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:*
3: SIDSI/gcgdata/geneseqy-embl/AA1981.DAT:*
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8: SIDSI/gcgdata/geneseqy-embl/AA1991.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

		æ				
Result		Query				
No.	Score	Match	Match Length DB	g :	ID	Description
П	598		110	22	AAE02447	Human IGF-I isofor
7	572.5			22	AAE02449	Rabbit IGF-I isofo
m	572.5			18	AAW23301	Rabbit insulin lik
4	260			æ	AAP70277	Sequence of pre-pr
ի	494.5			22	AAE02448	Rat IGF-I isoform
9	468			22	AAE02450	Human liver-type I
7	468			22	AAU09067	Human insulin-like
89	468			16	AAR83803	Insulin-like growt
6	468			19	AAW69733	Human IGF-1. Homo
10	468			19	AAW57882	Human IGF-I protei
11	468			3	AAW23302	Human insulin like

8452 Rabbit liver-typ	8 Human pr	56 Rabbi	44 Goat Insulin	8 Chim	Rat	Rat liver	Pep 17 u		Nuclear	5 Nucleic acid t	9 Rainbow tro	011 Recombin	Jo ednence of	Sequence	o eduence o	2	. 9	4	6 Peptide derive	0 Human IGF-I	sednen Sednen	7	74 Insulin li	4 Wild type IG	9 Recombin	7 Peptide deri	~	69 Human insulin	2 Human in	6 Insulin 1	871 Amino acid se	577 Native human	5948 IGF-1A amino acid
AAE024	AAP6057	AAE024	AAR408	AAW6406	· AAE024	AAE02531	AAY984	AAY 59027	AAU04	AAB4583	AAR8808	AAW5601	AAP400	AAP704	AAP71539											·		AAB127				AAY8	AAB35
22	7	7	-	~	7	2	21	C)	~	7	П	-																			21		
105	119	105	154	191	105	105	78	78	78	78	176	953	70	70	70	7.0	70	. 70	70	70	70	70	70	70	70	70	. 70	70	70	70	70	70	70
77.8	77.1	76.8	é	ė.	0	0	ω.	ω.	ω.	œ.	ė.	4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4
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4 Ex Ex Ex Ex Ex Ex Ex Ex Ex Ex

ALIGNMENTS

RESULT 1

AAE02447 standard; Protein; 110 AA.

AAE02447;

(first entry) 10-AUG-2001 Human IGF-I isoform mechano-growth factor (MGF) protein.

Human; IGF-I isoform; Insulin-like Growth Factor-I; MGF; mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzhelmer's disease; Parkinson's disease.

Homo sapiens

WO200136483-A1

25-MAY-2001

15-NOV-2000; 2000WO-GB04354.

99GB-0026968 15-NOV-1999; (UNLO) UNIV COLLEGE LONDON

Goldspink G, Johnson I;

WPI; 2001-355620/37. N-PSDB; AAD06398.

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The present invention relates to use of mechano-growth factor (MGF), an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motoneurone loss by 20% or greater in response to nerve
                                                                                                                                                                                                                                     avulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder, including a disorder of motoneurones and/or neurodegenerative disorder, eg., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, progressive poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF; mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease.
               Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
                                                                                                                                                                                                                                                                                                                                                                                    toxin, motoneurone trains, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with agi autosomal or sex-linked muscular dystrophy, diabetic neuropathy, peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is human IGF-I isoform MGF. MGF is a muscle isoform having extracellular (EC) domain, hence also referred as IGF-I.EC. The MGF protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4, 5 and 6 in the reading frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 598; DB 22; Length 110; 100.0%; Pred. No. 2.4e-54; Live 0; Mismatches 0; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 CAPLKPAKSARSVRAORHTDMPKTQKYQPPSTNKNTKSQRRKGSTFEEHK 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rabbit IGF-I isoform mechano-growth factor (MGF) protein.
                                                                                                        Claim 4; Page 50-51; 66pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAE02449 standard; Protein; 111 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5-NOV-2000; 2000WO-GB04354
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 100.
Matches 110; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oryctolagus cuniculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              110 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200136483-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-MAY-2001.
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288×8
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Gaps

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The present invention relates to use of mechano-growth factor (MGF),
an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
medicament for the treatment of neurological disorder. The MGF is capable.
Cof reducing motoneurone loss by 20% or greater in response to nerve
avulsion, and effects motoneurone rescue, preferably adult motoneurone
cof rescue. The MGP polynucleotide and polypeptide are useful in the
manufacture of a medicament for the treatment of a neurological disorder,
including a disorder of motoneurones and/or neurological disorder,
cof amyotrophic lateral sclerosis, spinal muscular atrophy,
cof spinal muscular atrophy, infantile or juvenile mescular atrophy,
cof poliomyelitis or post-polio syndrome, a disorder caused by exposure to
compare that affects motoneurone lesion or nerve damage, an
injury that affects motoneurones, motoneurone loss associated with aging,
cattosomal or sex-linked muscular dystrophy, diabetic neuropathy,
cattosomal or sex-linked muscular dystrophy, diabetic neuropathy,
cof peripheral neuropathies, Alzheimer's disease and Parkinson's disease.
Cof The present sequence is rabbit GFO isoform MGF. MGF is a muscle
cisoform having extracellular (EC) domain, hence also referred as
cof sequence of IGF-I exons 4, 5 and 6 in the reading frame
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                                                  Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder - \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GPETLCGAELVDALQEVCGDRGFYFINKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Insulin like growth factor 1; IGF-1; Ec peptide; muscle disorder; heart; neuromuscular disease.
                                                                                               mechano-growth factor, an isoform of Insulin-like Growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                95.7%; Score 572.5; DB 22; Length 111; 96.4%; Pred. No. 1.1e-51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRKGSTFEEHK 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. 1.1e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UNLO ) ROYAL FREE HOSPITAL SCHOOL MED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rabbit insulin like growth factor 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAW23301 standard; Protein; 121 AA.
                                                                                                                                                                             Claim 4; Page 54; 66pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 96.4 Matches 107; Conservative
Johnson I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oryctolagus cuniculus.
                                    WPI; 2001-355620/37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              111 AA;
                                                       N-PSDB; AAD06400
Goldspink G,
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with aging,
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WPI; 2001-355620/37.
N-PSDB; AAD06399.
                                                                                                                                                                             Similarity
                                                                                                                                           195 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25-MAY-2001.
                                                                                                                                                                                        Matches 103;
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                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                   AAE02448;
                                                                                                                                                                  Query Match
                                                                                                                                                                              Local
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                                                                                                                A use of insulin like growth factor I (IGF-1) has been developed, and is characterised by the presence of the Ec peptide, or a functional equivalent, in the treatment or therapy of a human or animal. The IGF-1 polypeptide can be used to treat muscular disorders, e.g. Duchenne or Becker muscular dystrophy, autosomal dystrophies and related progressive skeletal muscle weakness and wasting, muscle atrophy in ageing humans, spinal cord injury induced muscle atrophy and neuromuscular diseases, and cardiac disorders, e.g. diseases where promotion of cardiac muscle protein synthesis is a beneficial treatment, cardiomyopathies and acute heart failure or insult, specifically myocarditis or myocardial infarction. It can also be used to promote bone fracture healing and maintenance of bone in old age. The present sequence represents rabbit IGF-1 used in the present specification.
                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                        1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                           Use of insulin like growth factor I characterised by presence of Ecpeptide - to treat humans or animals, particularly muscle disorders, heart conditions or neuromuscular diseases
                                                                                                                                                                                                                                                                                                                                                                      ;
                                                                                                                                                                                                                                                                                                           DB 18; Length 121;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence of pre-pro-insulin-like growth factor 1B (ppIGF-1B).
                                                                                                                                                                                                                                                                                                                                                                                                     CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
                                                                                                                                                                                                                                                                                                                                                                                                                 recombinant DNA procedures for use as growth promoters for enhancing lactation, for stimulating cell proliferation etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New pre-pro-insulin-like growth factor-1 protein - obtd. by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cell proliferation.
                                                                                                                                                                                                                                                                                                                       1.2e-51;
                                                                                                                                                                                                                                                                                                           95.7%; Score 572.5; 96.4%; Pred. No. 1.2e
                                                                                                                                                                                                                                                                                                                                  1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Growth promoter; lactation enhancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAP70277 standard; protein; 195 AA
                                                                                            Disclosure; Fig 3; 33pp; English.
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                                                                                                                                                                                                                                                                                                                     Best Local Similarity 96.4
Matches 107; Conservative
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         WPI; 1997-470877/43
                                                                                                                                                                                                                                                                                   121 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-JAN-1987;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
A 42 base oligonucleotide corresponding to the DNA sequence encoding amino acids 10 to 23 of mature human IGF-I was synthesized (AAN70437). The radiolabelad 42 mar was then employed to screen for IGF-I containing DNA sequences in a human liver CDNA library. Insulin-like growth factors-1A and -1B cDNAs were isolated from a human cDNA library by using lambdagt 11 (AAN70435, AAN70436). The human IGF-I genomic gene was isolated and mapped. It encodes at least two preproinsulin-like growth factor-1 proteins. An essentially pure proproinsulin-like growth factor-1 protein comprising the sequence of amino acids shown in Figure six is claimed (AAP70277).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GPETLCGAELVDALOFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 195;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rat; IGF-I isoform; Insulin-like Growth Factor-I; MGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rat IGF-I isoform mechano-growth factor (MGF) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKG 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             109 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKG 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 560; DB 8; Pred. No. 3.8e-50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93.6%; Scor.
100.0%; Pred. No. s...
... 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAE02448 standard; Protein; 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-NOV-2000; 2000WO-GB04354.
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rescue. The MGF polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder, including a disorder of motoneurones and/orn neurodegenerative disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, progressive poliomyelitis or post-polio syndrome, a disorder caused by exposure to a toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with aging, peripheral neuropathies, Alzhaner's disease and Parkinson's disease. The present sequence is rat IGF-I isoform MGF is a muscle isoform having extracellular (EC) domain, hence also referred as IGF-I EC. The MGF protein compises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4, 5 and 6 in the reading frame
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111 AA; Sequence

1; Gaps ; H Length 111; Score 494.5; DB 22; Length Pred. No. 1.2e-43; 2; Mismatches 13; Indels 82.7%; 85.6%; 95; Conservative Query Match Best Local Similarity Matches

61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110

qq

AAE02450 standard; Protein; 105 AA. RESULT 6 AAE02450

AAE02450;

(first entry) 10-AUG-2001

Human liver-type IGF-I isoform (L.IGF-I) protein.

mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; pollomyelitis; post-pollos syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease; liver; L.IGF-I. Human; IGF-I isoform; Insulin-like Growth Factor-I; MGF;

Homo sapiens.

WO200136483-A1.

25-MAY-2001.

15-NOV-2000; 2000WO-GB04354.

99GB-0026968 15-NOV-1999; UNITO) UNIV COLLEGE LONDON.

Johnson I;

Goldspink G,

WPI; 2001-355620/37.

N-PSDB; AAD06403.

Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -

Disclosure; Fig 8; 66pp; English.

The present invention relates to use of mechano-growth factor (MGF),

ö an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, policomyelitis or post-polio syndrome, a disorder caused by exposure to a toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with aging, autosomal or sex-linked muscular dystrophy, diabetic neuropathy, peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is human liver-type IGF-I isoform (L.GF-I). The L.IGF-I protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4 and 6. Regulating memory consolidation in an animal comprising treating with an agent that modulates activity of one or more genes from z1f268, insulin-like growth factor, glutamate receptor 2, c/EBPbeta and VGF -Gaps 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60 Human; long-term memory protein; LTM; insulin-like growth factor; neuroleptic; anticonvulsant; nootropic; neuroprotective; IGF1; cerebroprotective; drug discovery; therapeutic profiling; learning disability; memory impairment; brain injury; epilepsy; mental retardation; senile dementia; Alzheimer's disease. Length 105; 78.3%; Score 468; DB 22; 100.0%; Pred. No. 6.4e-41; ive 0; Mismatches 0; Human insulin-like growth factor, IGF1. Disclosure; Page 90-91; 100pp; English AAU09067 standard; Protein; 137 AA. 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86 (UYBR-) UNIV BROWN RESEACH FOUND. 61 CAPLKPAKSARSVRAQRHTDMPKTQK HUGHES HOWARD MED INST 31-MAR-2000; 2000US-193614P. 02-APR-2001; 2001WO-US10661. 19-DEC-2001 (first entry) Best Local Similarity 100. Matches 86; Conservative Alberini CM, Bear MF; WPI; 2001-626335/72. N-PSDB; AAS14695. 105 AA; WO200174298-A2. Homo sapiens. 11-0CT-2001. Sequence Query Match HOGH-) RESULT 7 AAU09067 QQ g δ

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formulating a pharmaceutical preparation including one or more agents

(formulating a pharmaceutical preparation including one or more agents

(formulating a having an acceptable therapeutic profile and/or licensing

to a third party the rights for further drug development of the

(identified agents. The method of conducting development of the

comprises an additional step of establishing a distribution

(include establishing a sales group for marketing the preparation.)

(include establishing a sales group for marketing the preparation.)

pharmaceutical composition containing the agent is useful for enhancing memory consolidation in an animal, or for augmenting learning and memory, or otherwise for enhancing the functional performance of central nervous system neurons, where the agent is a cAMP phosphodisterase inhibitor, which activates adenylate cyclase. The composition is useful for treating diseases associated with learning disabilities, memory impairment e.g.

children and senile dementia, including Alzheimer's disease. The

children and senile dementia, including Alzheimer's disease. The

children and senile dementia, including Alzheimer's disease.
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The invention relates to modulating long term memory consolidation in an animal comprises treating with an agent that modulates the activity of one or more of genes from zif268, insulin-like growth factor (IGF), glutamate receptor 1 (GluR1), glutamate receptor 2 (GluR2), c/EBPBDeta and neuroendocrine VGF (neurotropin-inducible gene). The method is useful for identifying an agent which modulates memory consolidation. The method is useful for conducting a drug and/or target discovery business, which comprises conducting therapeutic profiling of the agents (or their analogues) identified, for efficacy and toxicity in animals, and
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asthma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Insulin-like growth factor 1 receptor; IGF-1; synthetic peptide;
autophosphorylation; cellular growth; proliferation; restenosis;
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/label= mature peptide
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/label= A domain
111..118
/label= D domain
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/label= B domain
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/label= C domain
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The amino acid sequence of the insulin-like growth factor 1 pre-protein. Processing of the protein results in a 70 amino acid mature protein. The mature protein is split into 4 domains: the B domain has strong homology to the B chain of insulin, the A domains: the B domain has strong homology to the B chain of insulin. These domains are separated by a C domain and the Chain of insulin. These domains are separated by a C domain and the Commain sequence was used to synthesis peptides (AARB3801-2) that include amino acid residues 60-64 of the mature IGF-1 protein. IGF-1 binds to the IGF-1 receptor (IGF-1R) via the D domain and induces activation of the IGF-1 R by autophosphorylation of the IGF-1R.

Activated IGF-1R is associated with cellular growth and proliferation. The Synthetic peptides are useful as inhibitors of IGF-1R.

The synthetic peptides are useful as inhibitors of IGF-1 binding to IGF-1R and thus may be used in the treatment of disorders characterised by undesirable cell proliferation eg. cancer, restenosis, asthma, burns,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
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                                                                                                                                                                            New synthetic IGF-1 analogues comprising 5-25 amino acids - useful in treatment of diseases associated with undesirable cell
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Pred. No. 9.5e-41;
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                                                                                                                                                                                                                                             Disclosure; Page 20-21; 28pp; English.
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                                                                               (UYJE-) UNIV JEFFERSON THOMAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              78.3%;
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             94WO-US14576
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                                              93US-0167653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                wounds or brain metastases.
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                                                                                                                                                                                                             proliferation
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                                              15-DEC-1993;
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Disclosure; Fig 13; 115pp; English.
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N-PSDB; AAT84894.
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                                                                                                                                                                                                                                                                                                                                                                                             A method has been developed of treating urinary incontinence (UI) in mammals. The method comprises delivering a nucleic acid vector for the expression of a growth factor or neurotrophic factor in a tissue or tissues. The present sequence represents human IGF-1 (insulin-like growth factor 1) which is used in the method of the invention. Due to the growth and stimulatory effects of growth factors and neurotrophic factors, introducing these factors to degenerated muscles in the urinary system can improve UI by enhancing both their integrity and neural innervation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
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                                                                                                                                                                                 Treatment of urinary incontinence - by delivering nucleic acid vector for expression of growth factor or neurotrophic factor in
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100.0%; Pred. No. 9.5e-41;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                            Claim 12d; Page 108-109; 117pp; English.
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96US-0031539.
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                                                                     WPI; 1998-437184/37.
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                                                                                                        N-PSDB; AAV50425
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This sequence is the invalid factor of the invention, for expression of a nucleic acid sequence in a cell, which comprises: (a) a nucleic acid cassette containing a sequence encoding IGF-I; (b) a 5' flanking region including one or more sequences necessary for expression of the nucleic acid cassette, including a promoter from a skeletal alpha-actin gene; (c) a linker connecting the 5' flanking region to a nucleic acid, the coll cassette, including a promoter from a skeletal alpha-actin gene; (c) a linker connecting the 5' flanking region to a nucleic acid, the lacking the coding sequence of a gene with which it is naturally associated; and (d) a 3' flanking region, including a 3' untranalated cassociated; and (d) a 3' flanking region, including a 3' untranalated cassociated; and (d) a 3' flanking region, including a 3' untranalated cassociated; and (d) a 3' flanking region, including a 3' untranalated cassociated; and (d) a 3' flanking region, including a 3' untranalated cassociated; and growth hormone 3'-upr. The vector can provide for efficient IGF-I expression, particularly in gene therapy. It can be used for the delivery of IGF-I for treating diseases such as muscle atrophy, clanberes, neuropathy, osteoporosis, and growth disorders. They can be used for treating peripheral neuropathies resulting from diabates, class casc disease such as Type I or Type II diabates, atherosciertic, cardiovascular, cerebrovascular, or peripheral vascular disease.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  anti-viral drugs. The vectors can also be used to create transgenic animals for research or livestock improvement.
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sequence is the human insulin-like growth factor I (IGF-I).
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Matches 86; Conservative 0; Mismatches
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present invention relates to use of mechano-growth factor (MGF), Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
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Matches 85; Conservative
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                                                                                                                                                                                                                                                                                                                105 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF; mechano-growth factor; neurological disorder; neurodegenerative disorder; menororghic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-pollo syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease; liver; L.IGF-I.
                                                                                                           progressive
                                               A use of insulin like growth factor I (IGP-1) has been developed, and is characterised by the presence of the Ec peptide, or a functional equivalent, in the treatment or therapy of a human or animal. The IGF-1 polypeptide can be used to treat muscular disorders, e.g. Duchenne or Becker muscular dystrophy, autosomal dystrophies and related progressive skeletal muscle weakness and wasting, muscle atrophy in ageing humans, shall a muscle weakness and wasting, muscle atrophy in ageing humans, spinal cord injury induced muscle atrophy and neuromuscular diseases, and cardiac disorders, e.g. diseases where promotion of cardiac muscle protein synthesis is a beneficial treatment, cardiomyopathies and acute heart failure or insult, specifically myocarditis or myocardial infarction. It can also be used to promote bone fracture healing and maintenance of bone in old age. The present sequence represents human IGF-1 Ba isoform used in the present specification.
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                                                                                                                                                                                                                                                                                                                                                   52 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 111
                                                                                                                                                                                                                                                                                                                          1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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9.7e-41;
                                                                                                                                                                                                                                                             heart conditions or neuromuscular diseases
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                          Disclosure; Fig 4; 33pp; English.
                                                                                                                                                                                                                                                                                                                                                                               61 CAPLKPAKSARSVRAQRHTDMPKTQK
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                                                                                                                                                                                                                                                                                                 86; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Oryctolagus cuniculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-355620/37.
                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                           156 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB; AAD06405
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10-AUG-2001
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                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAE02452;
                                                                                                                                                                                                                                                                                                 Matches
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ID AAE0
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medicament for the treatment of neurological disorder. The MGF is capable of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder, including a disorder of motoneurones and/or neurodegenerative disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, progressive conjoury that affects motoneurone, a disorder caused by exposure to a toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with aging, putcomal or sex-linked muscular dystrophy, diabetic neuropathy, perspect of property is an expensive sequence is rabbit liver-type IGF-I isoform (L.IGF-I).

The L.IGF-I protein comprises amino acid sequences encoded by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The L.IGF-I protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4 and 6.

Note: The present sequence (SEQ ID NO: 14) is stated as being the same as that shown in figure 10 (AAE02456) of the specification. However it differs at few positions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
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Pred. No. 1.3e-40;
1; Mismatches 0;
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/label= prepro-somatomedin-C
15..84
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/label= mature somatomedin-C
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98.8%;
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Mon Oct 28 09:44:44 2002

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Gaps 9

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Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF; mechano-growth factor; neurological disorder; neurodegenerative disorder; amyokrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-pollo syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease; liver; L.IGF-I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rabbit liver-type IGF-I isoform (L.IGF-I) protein, alternative version.
                                                                                                                                                                                                                                                                              15 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDHRLEMY 74
                                                         The sequence is human prepro-somatomedin-C. DNA probes prepared against DNA encoding the protein sequence may be used to detect the presence of the genes in a natural source. The probes may be used to detect mutations and/or deletions in humans suffering from growth deficiencies. See also AAN60489, AAN60491
                                                                                                                                                                                                                                                            1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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                                                                                                                                                                                                Score 461; DB 7; Length 119;
Pred. No. 3.8e-40;
0; Mismatches 1; Indels
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                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                       61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
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                              Disclosure; Fig 1; 20pp; English.
                                                                                                                                                                                                 77.1%;
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                                                                                                                                                                                Query Match
Best Local Similarity 98 60,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10-AUG-2001 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Oryctolagus cuniculus.
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                                                                                                                                                                     119 AA;
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 liver cells
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                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAE02456;
                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 14
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The present invention relates to use of mechano-growth factor (MGF),

an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
medicament for the treatment of neurological disorder. The MGF is capable

of reducing motoneurone loss by 20% or greater in response to nerve

avulsion, and effects motoneurone rescue, preferably adult motoneurone

cavelsion, and effects motoneurone rescue, preferably adult motoneurone

cavelsion, and effects motoneurone rescue, preferably adult motoneurone

cavelsion, and effects motoneurones and/or neurodegenerative disorder,

including a disorder of motoneurones and/or neurodegenerative disorder,

cavelsion anyotrophic lateral sclerosis, spinal muscular atrophy,

poliomypelitis or post-polio syndrome, a disorder caused by exposure to a

compact of motoneurone, and anyotrophy, infantile or juvenile muscular atrophy,

compact of motoneurone or inconceurone lesion or nerve damage, and

injury that affects motoneurones, motoneurone loss associated with aging,

autosomal or sex-linked muscular dystrophy, diabetic neuropathy,

compact of sequence is alternative version of rabbit liver-type IGF-I

concoded by nucleic acid sequence of IGF-I exons 4 and 6

concoded by nucleic acid sequence of IGF-I exons 4 and 6

concoded by nucleic acid sequence of IGF-I exons 4 and 6

concoded by nucleic acid sequence of IGF-I exons 4 and 6

concoded by nucleic acid sequence 1 setting (AABC02452) of the specification. However Gaps 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60 1 GPQTLCGAQLVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60 The goat IGF precursor is useful for the preparation of IGF-1 which is used for growth of bone and the therapy of tumours. The IGF-1 precursor is prepared by inserting the coding sequence into an Goat insulin-like growth factor I - useful for prepn. of insulin-like growth factor I used for growth of bone and tumour .. Length 105; Indels Goat Insulin like growth factor 1 (IGF-1) precursor. ö Score 459; DB 22; Pred. No. 5.4e-40; Insulin; growth factor; bone; tumour therapy 3; Mismatches AAR40844 standard; Protein; 154 AA. 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86 Claim 2; Figure 1; 6pp; Japanese. 76.8%; 96.5%; it differs at few positions. 91JP-0347820 91JP-0347820 (first entry) 83; Conservative WPI; 1993-284680/36. Query Match Best Local Similarity 105 AA; (KOMA/) KOMANO T. N-PSDB; AAQ47804. JP05199878-A. Capra hircus 02-DEC-1991; 02-DEC-1991; 10-AUG-1993. 03-MAR-1994 Sednence AAR40844; therapy Matches 61 RESULT 1: AAR40844 g δ q X A X Y ò

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expression vector, transforming a host cell with the expression vector, culturing the transformed cell and retrieving the IGF-1 precursor from the culture supernatant.
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Sequence 154 AA;

0; Gaps Query Match 76.8%; Score 459; DB 14; Length 154; Best Local Similarity 97.7%; Pred. No. 8.2e-40; Matches 84; Conservative 0; Mismatches 2; Indels (

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Search completed: October 25, 2002, 15:57:09 Job time: 27.1807 secs

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US-09-142-583A-4
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Sequence 9, A
Sequence 1, A
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Sequence 41,
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Sequence 11
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Sequence
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/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
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                5.1.3
Compugen Ltd.
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US-08-989-251-41

US-09-340-250-41

US-09-528-108-41

US-09-528-108-47

US-08-460-971A-47

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US-07-947-035-11

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US-08-219-878A-1
PCT-US93-04329-1
US-09-142-583A-11
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                                                                                                                                                                                                                                                                                                                                              of hits satisfying chosen parameters:
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PCT-US95-08925-1
                                                                                                                                                                                                                                                                                                              231628 seqs, 24425594 residues
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                   GenCore version
Copyright (c) 1993 - 2002
                                                                                                                       2002, 15:55:52;
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Maximum Match 100%
Listing first 45 summaries
                                                                                     - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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                                                                                                                       October 25,
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Match
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Patent No. 6221842
GENERAL INFORMATION:
APPLICANT GOLDSPINK, GEOFFREY
ATTLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS
NUMBER OF SEQUENCES: 11
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COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

FILING DATE: 29-Oct-1998

CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 572.5; DB 4;
Pred. No. 1.3e-60;
1; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/GB97/00658
FILING DATE: 11-MAR-1997
APPLICATION NUMBER: GB 9605124.8
FILING DATE: 11-MAR-1996
ATTORNEY/AGENT INFORMATION:
NAME: SADOFF, B. J.
REGISTRATION NUMBER: 36663
US-07-989-845-28
US-07-989-844-12
US-08-161-044-12
US-08-161-044-12
US-08-151-141
US-08-241-12
PCT-US93-11297-12
PCT-US93-11297-12
US-09-029-267-14
US-08-38-961-8
US-08-989-251-39
US-08-989-251-39
US-08-180-251-39
US-08-180-251-39
US-08-180-251-39
US-08-180-572-5
US-08-180-572-5
US-08-180-572-5
US-08-180-572-5
US-08-180-572-5
US-08-180-572-5
US-08-180-572-5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: NIXON & VANDERHYE P.C. STREET: 1100 NORTH GLEBE ROAD CITY: ARLINGTON STATE: VA COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 117-263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION: TELEPHONE: 7038164000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 121 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: 7038164100
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 95.7%;
Best Local Similarity 96.4%;
Matches 107; Conservative
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MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: S
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RESULT 3
US-08-950-720A-9
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1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                          61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
                                                                                78.3%; Score 468; DB 1; Length 137; 100.0%; Pred. No. 3.7e-48; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                            APPLICANT: CHEN, Thomas T
APPLICANT: SHAMBLOTT, Michael J
AITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED
TITLE OF INVENTION: FROM RAINBOW TROUT
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
ADDRESSEE: Burns, Doane, Swecker & Mathis
                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Burns, Doane, Swecker & Mathis STREET: George Mason Bldg., Washington & Prince Sts. CTTY: Alexandria STATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
CAPLICATION NUMBER: US/07/953,230A
FILLING DATE: 30-SEP-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; OTHER INFORMATION: /note= "Gap of 27 after 116.
US-07-953-230A-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "Gap of 2 after 7."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY AGENT INFORMATION:
NAME: Crane-Feury, Sharon E
REGISTRATION NUMBER: 36,113
REFERENCE/DOCKET NUMBER: 028755-010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 836-6620
TELEFAX: (703) 836-2021
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER REALABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                            US-07-953-230A-10
; Sequence 10, Application US/07953230A
; Patent No. 5476779
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 137 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE: Virginia
COUNTRY: United States
ZIP: 22313-1404
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Matches 86; Conservative
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MOLECULE TYPE: protein
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LOCATION: 31
OTHER INFORMATION:
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                                                                                                                                                           RESULT 2
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Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23 GPETLCGAELVDALQEVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 82
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Patent No. 5473054
GENERAL INFORMATION:
APPLICANT: Bradford A. Jameson and Renato Baserga
TITLE OF INVENTION: IGF-1 Analogs
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Woodcock Washburn
Kurtz Mackiewicz & No. 5473054ris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM: DOS
SOFTWARE: FastSEO for Windows Version 2.0
SUBRENT APPLICATION DAY:
APPLICATION NUMBER: US/08/950,720A
Sequence 9, Application US/08950720A
Patent No. 6046028
GENERAL INFORMATION:
APPLICANT: Conklin, Darrell C.
APPLICANT: Lofton Day, Catherine E.
APPLICANT: Loston Si
APPLICANT: Jose SI

                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: ZymoGenetics, Inc.
STREET: 1201 Bastlake Avenue East
CITY: Seattle
STATE: WA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 CAPLKPAKSARSVRAORHIDMPKTOK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: SAVISIAK, Deborah A
REGISTRATION NUMBER: 37,438
REFERENCE/DOCKET NUMBER: 96-0
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-442-6672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No. 6046028e
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TYPE: .amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA: APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
CLASSIFICATION: 435
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MOLECULE TYPE:
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ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-219-878A-1
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49 GPETLCGAELVDALQEVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
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                                                                                                                                                                                                                                                                                                                                         1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 11, Application US/09142583A
Patent NO. 6221842
GENERAL INFORMATION:
APPLICANT: GOLDSPINK, GEOFFREY
TITLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 156;
                                                                                                                                                                                                                                                     Length 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/142,583A
FILING DATE: 29-Oct-1998
CLASSIFICATION: CLASSIFICATION: CLASSIFICATION: CLASSIFICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: WO PCT/GB97/00658
FILING DATE: 11-MAR-1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                  78.3%; Score 468; DB 5; 1 ilarity 100.0%; Pred. No. 4.2e-48; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               78.3%; Score 468; DB 4; 100.0%; Pred. No. 4.3e-48; tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: NIXON & VANDERHYE P.C. STREET: 1100 NORTH GLEBE ROAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 117-263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 11:
US-09-142-583A-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: SADOFF, B. J. REGISTRATION NUMBER: 36663
                                                                                                                                                                                                                                                                                                                                                                                                                                                  109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION:
             REFERENCE/DOCKET NUMBER: TJU-
TELECOMMUNICATION INFORMATION:
TELEFAN: (215) 568-3100
TELEFAN: (215) 568-3439
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                            61 CAPLKPAKSARSVRAQRHTDMPKTQK
33,229
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SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 78.3
Best Local Similarity 100.
Matches 86; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: ARLINGTON
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: USA
                                                                                                                                                                       AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22201
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Matches 86; Conserv
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                                                                                                                                                                                      TOPOLOGY:
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                                                                                                                                                   LENGTH:
                                                                                                                                                                                                                                                       Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMDUTER READABLE FORM:
MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
                                                                                                                      E: DISKETTE, 3.5 INCH, 1.44 Mb STORAGE IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Bradford A. Jameson and Renato Baserga
TITLE OF INVENTION: IGF-1 Analogs
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1; I
4.2e-48;
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100.0%; Pred. No. *..
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: Woodcock Washburn
ADDRESSEE: Kurtz Mackiewicz & Norris
STREET: One Liberty Place - 46th Floor
CITY: Philadelphia
STATE: PA
One Liberty Place - 46th Floor
                                                                                                                                                                                      SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/219,878A
FILING DATE: 30-MAR-1994
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/881,524
FILING DATE: 08-MAY-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: PCT/US93/04329
FILING DATE: 19930507
                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: TJU-1240 TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         equence 1, Application PC/TUS9304329 GENERAL INFORMATION:
                                                                                                                                                                       PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/881,524
FILING DATE: 08-MAY-92,
ATTORNEY AGENT INFORMATION:
NAME: MATK DELUCA
                                                                                                                                                                                                                                                                                                                                                                             NAME: Mark DeLuca
REGISTRATION NUMBER: 33,229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM: PC-DOS
SOFTWARE: WORDPERFECT 5.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: (215) 568-3100
TELEFRAX: (215) 568-3439
INFORMATION FOR SEO ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 78.39
Best Local Similarity 100.4
Matches 86; Conservative
                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETT
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                    Philadelphia
                                                                                                                                                                    OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
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                                                                                19103
                                                                                                                                                   COMPUTER:
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PCT-US93-04329-1
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INFORMATION FOR SEQ ID NO:
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                                                                TOPOLOGY:
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                                                                                                    US-08-989-251-41
                                                                                                                                                                                                                                                                                                                                                                               US-09-340-250-41
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                                LENGTH:
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STATE:
                                                                                                                                        Query Match
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                         1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDHRRLEMY 74
       1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 461; DB 6; Length 119;
Pred. No. 2.1e-47;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 41, Application US/08989251
| Patent No. 6017731
| GENERAL INFORMATION:
| APPLICANT: Textanp-01son, Patricia | TITLE OF INVENTION: PROTEINS IN YEAST | NUMBER OF ENVENCES: 41
| CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                ; Patent No. 5405942
; APPLICANT: BELL, GRAEME I.; RALL, LESLIE B.; MERRYWEATHER.
                                                                                                                                                                                                                                                    TITLE OF INVENTION: PREPRO INSULIN-LIKE GROWTH FACTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SSEE: Bell Seltzer IP Group of Alston & Bird, 1: 3605 Glenwood Ave. Suite 310 Raleigh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/989,251
                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 16
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/65,673
FILING DATE: 16-JUN-1987
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 630,557
FILING DATE: 19-JUL-1984
                                                                                                61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 CAPLKPAKSARSVRAQRHTDMPKTOK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: 5784-4
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919 420 2202
TELEFAX: 919 881 3175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             77.1%;
98.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 77.1
Best Local Similarity 98.8
Matches 85; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
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LENGTH: 119
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US-08-989-251-41
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CITY: Ra
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                                                                                                                             Length 191;
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                                                                                                                                                                                                                                                                                                                                                                                             Sequence 41, Application US/09340250
Patent No. 6083723
GENERAL INFORMATION:
APPLICANT: Tekamp-Olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
TITLE OF INVENTION: PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3605 Glenwood Ave. Suite 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SYSTEM: PC-DOS/MS-DOS
PatentIn Release #1.0, Version #1.30
                                                                                                                             DB 3;
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Pred. No. 9.7e-47;
0; Mismatches 0;
                                                                                                                           Score 457.5; DB 3
Pred. No. 9.7e-47;
0; Mismatches 0
                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/340,250
                                                                                                                                                                                                                                                                       61 CAPLKPAKSA-RSVRAQRHTDMPKTQK 86
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APPLICATION NUMBER: 08/989,251
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
REFRENCE/DOCKET NUMBER: 5784
TELECOMMULICATION INFORMATION:
TELEPHONE: 919 420 2202
TELEFAX: 919 881 3175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-
                                                                                                                           76.5%;
98.9%;
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98.9%;
               191 amino acids
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amino acid
                                                                                                                                                               Conservative
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                        protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; MOLECULE TYPE: protein US-09-340-250-41
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MEDIUM TYPE: Floppy
                                  amino acid
                                                        linear
                                                                                                                                        Best Local Similarity
Matches 86; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
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Best Local Similarity
Matches 86; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Raleigh
                                                                    MOLECULE TYPE:
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STREET: 633 West Fifth Street STREET: 633 West Fifth Street CITY: Los har
                                                                          CITY: Los Angeles
STATE: California
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STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
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Matches 75; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       76.5%; Score 457.5; DB 4; Length 191; 98.9%; Pred. No. 9.7e-47; tive 0; Mismatches 0; Indels 1;
                                                                                                                                                                           TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS TITLE OF INVENTION: PROTEINS IN YEAST NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP STREET: 3605 Glenwood Ave. Suite 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 47, Application US/08460890A
Patent No. 5994109
GENERAL INFORMATION:
APPLICANT: Woo, Savio L.C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gottchalk, Stephen
TITLE OF INVENTION: METHODS OF USE
                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CUKKENT AFFLICALIUN DAIN.

PUDICATION NUMBER: US/09/528,108
FILING DATE:
CIASSIFICATION:
PRIOR APPLICATION
APPLICATION NUMBER: 08/989,251
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
REGISTRATION NUMBER: 5784-4
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       146 CAPLKPAKSAKRSVRAQRHTDMPKTQK 172
                      61 CAPLKPAKSA-RSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                       PC-DOS/MS-DOS
                                                                                                                           Sequence 41, Application US/09528108 Patent No. 6312923
                                                                                                                                                                                                                                                                                                                                                                                              MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: 41:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                : 191 amino acids
amino acid
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Matches 86; Conservative
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                                                                                                                                                                                                                                                                                                                                                              ZIP: 27622
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
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                                                                                                                                                              GENERAL INFORMATION:
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STREET: 3000
TTY: Raleigh
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US-08-460-890A-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY:
                                                                                                            US-09-528-108-41
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4 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAP 63
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 47, Application US/08167641C
Patent No. 6033884
GENERAL INFORMATION:
APPLICANT: Woo, Savio L.C.
APPLICANT: Gristiano, Richard J.
APPLICANT: Gristiano, Richard J.
APPLICANT: Gottchalk, Stephen
TITLE OF INVENTION: MUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2; Length 78;
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Pred. No. 8e-42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2; Mismatches
                                                                                                                                                                                                 APPLICATION NUMBER: US/08/460,890A CLASSIFICATION: 435
PRIOR APPLICATION: 435
PRIOR APPLICATION DATA: APPLICATION NUMBER: 08/167,641
FILING DATE: December 14, 1993
APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/0893/02725
FILING DATE: MARCH 19, 1993
ATTORNEY AGENT INFORMATION:
COUNTRY: U.S.A.
ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
                                                                                                                COMPUTER: IBM Compatible OPERATING SYSTEM: IBM P.C. DOS 5.0 SOFTWARE: FastSEQ for Windows 2.0 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 21
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEEX: 67-3510
INFORMATION FOR SEQ ID NO: 47:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          32,327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      68.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Warburg, Richard REGISTRATION NUMBER: 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 78 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    64 LKPAKSARSVRAQRHTD 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 , MOLECULE TYPE: peptide US-08-460-890A-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Ly
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90071-2066

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4 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAP 63
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 47, Application US/08462040
Patent No. 6177554
GENERAL INFORMATION:
APPLICANT: With, Louis C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Rathorn
TITLE OF INVENTION: MUCLEIC ACID TRANSPORTER SYSTEMS AND TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 4; Length 78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ouery Match 68.9%; Score 412; DB 4
Best Local Similarity 97.4%; Pred. No. 8e-42;
Matches 75; Conservative 2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2; Mismatches
                                                                                                            FILING DATE: December 14, 1993
APPLICATION NUMBER: 07/85,389
FILING DATE: MARCH 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: MARCH 19, 1993
ATTORNEY/AGENT INFORMATION:
NAME: WARDING, RICHARD J.
REGISTRATION NUMBER: 32,337
REFERENCE/DOCKET NUMBER: 212/063
TELECHONE: (213) 489-1600
TELECHONE: (213) 955-0440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPOTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
APPLICATION NUMBER: US/08/460,971A FILING DATE: June 5, 1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/167,641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FastSEQ for Windows 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/462,040 FILING DATE: June 5, 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION: 536
REAL ARDPLICATION DATA:
ARDPLICATION NUMBER: 08/167,641
FILING DATE: December 14, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE: Lyon & Lyon STREET: 633 West Fifth Street STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                TELEPHONE: (213) 489-160
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 4
SEQUENCE CHARACTERISTICS:
LENGTH: 78 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64 LKPAKSARSVRAQRHTD 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
ZIP: 90071-2066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid
STRANDEDNESS: si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-460-971A-47
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAP 61
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97.4%; Pred. No. 8e-42;
""" """ or Indels
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APPLICANT: Smith, Louis C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gottchalk, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
CORRESPONDENCE ADDRESS:
65
CORRESPONDENCE ADDRESS:
                            MEDIUM TYPE: 3.5" Diskette, 1.44 Mb MEDIUM TYPE: 3.5" Diskette, 1.44 Mb MEDIUM TYPE: storage COMPUTER: IBM Compatible OPERATING SYSTEM: IBM P.C. DOS 5.0 SOFTWARE: FastSEQ for Windows 2.0 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/167,641C FILING DATE: Docember 14, 1993
                                                                                                                                                                                                                     CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/855,389
FILING DATE: MARCH 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: MARCH 19, 1993
ATORNEY/AGENT INFORMATION:
NAME: WARDLIG, RICHARD J.
REGISTRATION NUMBER: 32,327
REFRENCE/DOCKET NUMBER: 305/012
TELEPHONE: (213) 955-0440
TELEX: (213) 955-0440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FastSEQ for Windows 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; Sequence 47, Application US/08460971A; Patent No. 6150168
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     78 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ouery Match 68.99
Best Local Similarity 97.49
Matches 75; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   64 LKPAKSARSVRAQRHTD 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 TLGGAELVDALQFYCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAP 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: CHEN, Thomas T
APPLICANT: CHEN, Thomas T
TITLE OF INVENTION: INSULINFLIKE GROWTH FACTORS ISOLATED
TITLE OF INVENTION: INSULINFLIKE GROWTH FACTORS ISOLATED
TITLE OF INVENTION: FROM RAINBOW TROUT
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Burns, Doane, Swecker & Mathis
STATE: George Mason Bldg., Washington & Prince Sts.
CITY: Alexandria
STATE: Virginia
COUNTRY: United States
IPP 22313-1404
COMPUTER: ELOPPY disk
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
COMPUTER: DATE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION DATE: 30-SEP-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 4; Length 78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 68.9%; Score 412; DB 4;
Best Local Similarity 97.4%; Pred. No. 8e-42;
Matches 75; Conservative 2; Mismatches
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                MAME: Warburg, Richard J.

REGISTRATION NUMBER: 32,327

REFERENCE/DOCKET NUMBER: 212/078

TELEPHONE: (213) 489-1600

TELEPA: (213) 955-0440

TELERA: (213) 955-0440

INFORMATION FOR SEQ ID NO: 47:

SEQUENCE CHARACTERISTICS:

LENGTH: 78 amino acids

TYPE: amino acid

STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 9, Application US/07953230A
Patent No. 5476779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Crane-Feury, Sharon E
REGISTRATION NUMBER: 36,113
REPERENCE/DOCKET NUMBER: 02875
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (703) 836-6620
TELEFAX: (703) 836-620
INFORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 176 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         64 LKPAKSARSVRAQRHTD 80
                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-462-040-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-07-953-230A-9
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                                                                                   Gaps
                                                                                  19; Indels 16;
                                               66.6%; Score 398; DB 1; Length 176; 62.8%; Pred. No. 9.9e-40; Live 10; Mismatches 19; Indels
                                                                                                                                                                                                                                                                                                                                  Search completed: October 25, 2002, 16:00:04 Job time: 10.9398 secs
                                               Query Match
Best Local Similarity 62.88
Matches 76; Conservative
; MOLECULE TYPE: protein US-07-953-230A-9
                                                                                                                                                                                                                                                  105 T 105
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October 25, 2002, 15:55:02; Search time 12.5904 Seconds (without alignments) 839.517 Million cell updates/sec
GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                       OM protein - protein search, using sw model
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Run on:

Title: Perfect score:

US-09-852-261-2 598 1 GPETLCGAELVDALQFVCGD......STNKNTKSQRRKGSTFEEHK 110 Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283138 seqs, 96089334 residues rched:

283138

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR_71:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Вe

Description	1 ,	-11Ke	insulin-like growt	insulin-like	-like	-like			-like		_		-like	insulin-like growt		insulin-like growt			insulin-like growt	-	-	insulin-like growt		insulin-like growt	insulin-like growt			G)	insulin-like growt
QI		TOHOTE	AZ0639	A27804	IGGP1	A36552	IGHOI	S12825	PN0622	IGB01	JC2483	S22878	A33390	B27804	A25540	B40912	A41399	A36079	C54270	C44012	A41396	A54270	B54270	D54270	A46244	\sim	A53697	B46244	T10897
DB	; -	٦ ,	4 0	1 (1	7	7	П	7	7	7	~	7	7	7	7	7	~	7	7	7	7	~	7	7	7	7	7	~	7
% Query Match Length		190	123	181	137	137	153	153	122	153	154	138	154	153	127	127	153	153	161	155	176	188	188	4	7	2	9	214	œ
% Query Match	3 60	0,0	0 8	82.6	78.	78.	78.	77.	77.	77.	76.	76.	76.	75.	74.		70.	70.	67.	67.	67.	. 79							
Score		٦.	702	494	468	468	マ	464.5	463	463	459	455	455	450	447	432		13		401	401	401	401	399	398	298.5	$^{\circ}$	264.5	248.5
esult No.		٦ ٢	4 6	4	ß	9	7	80	σ	10	11	12	13	14	1.5	16	17	18	19	20	21	22	23	24	25	56	27	28	53

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insulin-like growt	insulin - shorthor														
S04858	157671	IGB02	A24913	IGHU2	IGRT2	153642	B60738	S02423	A38612	167610	151240	S66484	A60740	A34049	INFIS
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179	128	155	180	180	180	93	181	183	139	183	79	210	99	44	20
40.3	39.3	39.3	39.0	38.6	38.4	38.2.	38.1	37.7	36.7	36.7	35.5	34.6	33.4	29.8	26.7
241	235	235	233	231	229.5	228.5	228	225.5	219.5	219.5	212.5	207	200	178	159.5
30	31	32	33	34	32	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

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AZ 804

AZ 804

AZ 804

AZ 804

C; Species: Rattus norvegicus (Norway rat)
C; Species: Rattus norvegicus (Norway rat)
C; Species: Rattus norvegicus (Norway rat)
C; Species: O-Jun-1988 #sequence_revision 09-Jun-1988 #text_change 16-Jul-1999
C; Accession: AZ7804; 165202
R; Shimatsu, A.; Rotwein, P.
J. Biol. Chem. 252, 78847900, 1987
A; Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence, A; Reference number: A27804
A; Reference number: AZ7804
A; Residues: DNA
A; Molecule Lype: DNA
A; Mesidues: 1-181 < SHI>
A; Residues: 1-181 < SHI>
B; Roberts, C.T.
B; Roberts, C.T.
B; Roberts, C.T.
B; Roberts, C.T.
A; Reference number: 152218; MUID:87298553
A; Title: Rat IGF-1 CDNA's contain multiple 5'-untranslated regions.
A; Reference number: 152218; MUID:87298553
A; Residues: 1-27 < RES>
A; Residues: 1-27 < RES>
A; Cross-references: GB:MI7594; NID:g204759; PIDN:AAA41390.1; PID:g204760
C; Superfamily: Insulin
C; Keywords: alternative splicing
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C;Species: Cavia porcellus (ginea pig)
C;Date: 30-5ep-1991 #sequence_revision 30-Sep-1991 #text_change 07-Nov-1997
C;Accession: S12719
R;Bell, G.I.; Stempien, M.M.; Fong, N.M.; Seino, S.
Nucleic Acids Res, 18, 4275, 1990
A;Title: Sequence of a conding guinea pig IGF-I.
A;Reference number: S12719; MuID:90332447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             49 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                             A;Cross-references: GB:M15480; NID:g204749; PIDN:AAA41385.1; PID:g204750 C;Superfamily: insulin
                                                                                                                                                      Length 133;
                                                                                                                                                                                                                                                                                                                                                                                     61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
                                                                                                                                                                                                                                                                                                                                                                                                                    Length 181;
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                                                                                                                                                                                                             Indels
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                                                                                                                                                Score 503.5; DB 2;
Pred. No. 2.5e-45;
2; Mismatches 12;
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Pred. No. 3.3e-44;
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                                                                                                                                                Query Match
Best Local Similarity 86.5%;
Matches 96; Conservative
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A,Molacule type: mRNA
A,Residues: 1-137
A,Cross-references: EMBL:X52951
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Matches 92; Conservative
                                 1-133 <ROB>
      A; Molecule type: mRNA
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                                    A; Residues:
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               A.Map position: 1292-12924.1.
A.Mat position: 1292-12924.1.
A.Mat position: 1292-12924.1.
A.Matronas: 21/3; 74/1; 134/3
A.Matronas: 21/3; 74/1; 134/3
A.Matronas: 21/3; 74/1; 134/3
A.Matronas: 21/3; 74/1; 134/3
C.Seperfamily: insulin
C.Seperfamily: insulin
C.Seperfamily: insulin-like growth factor 1 #status predicted <AMT>
F.2-48/Domain: insulin connecting C peptide-like #status predicted <AMT>
F.49-77/Domain: insulin connecting C peptide-like #status predicted <CHC>
F.90-110/Domain: insulin connecting C peptide-like #status predicted <CHC>
F.111-118/Domain: D peptide #status predicted <CHD>
F.111-118/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CHC>
F.111-118/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <MA2>
F.151-172/Product: insulin-like growth factor IB-E1 amide #status predicted <MA2>
F.54-96,66-109,95-100/Disulfide bonds: #status predicted
F.172/Modified site: amidated carboxyl end (Arg) (amide in mature form following gl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Accession: A40912
R;Roberts Jr., C.T.; Lasky, S.R.; Lowe Jr., W.L.; Seaman, W.T.; LeRoith, D.
Mol. Endocrinol. 1, 243-248, 1987
A;Title: Molecular cloning of rat insulin-like growth factor I complementary deoxyribonu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NID:956424; PIDN:CAA29480.1; PID:95
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Nucleic Acids Res. 15, 7196, 1987
Nucleic Acids Res. 15, 7196, 1987
A.Title: Sequence of two rat insulin-like growth factor I mRNAs differing within the S. Arcession: A26859; MUID:88015572
A.Accession: A26859
A.Molecule type: mRNA
A.Coss-references: GB:X06107; GB:M32260; GB:Y00429; NID:g56424; PIDN:CAA29480.1; PID
C.Superfamily: insulin
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C;Species: Rattus norvegicus (Norway rat)
C;Date: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change 16-Jul-1999
C;Accession: A26859
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C;Date: 28-Feb-1992 #sequence_revision 28-Feb-1992 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1; Length 195
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Pred. No. 3.9e-47;
2; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 560; DB 1; Pred. No. 4.6e-51;
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Matches 103; Conservative 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; Keywords: alternative splicing; growth factor
GDB:120081; OMIM:147440
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Areference number: A40912; MUID:88288198
A;Accession: A40912
A;Status: preliminary
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Matches 99; Conserv
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A; Molecule type: mRNA
A; Residues: 1-153 < LEB>
A; Residues: 1-153 < LEB>
A; Cross-references: GB:M27544; NID:g184829; PIDN:AAA52787.1; PID:g306927
A; Cross-references: GB:M27544; NID:g184829; PIDN:AAA52787.1; PID:g306927
B; Rinderknecht, E.; Humbel, R.E.
J. Biol. Chem. 253, 2769-2776, 1978
A; Title: The amino acid sequence of human insulin-like growth factor I and its struct
A; Reference number: A92226; MUID:78130171
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A; Residues: 1-153 <NOR>
A; Residues: 1-153 <NOR>
A; Cross-references: EMBL:X56773; NID:g32989; PIDN:CAA40092.1; PID:g32990
R; Sandberg-Nordqvist, A.C.; Stahlbom, P.A.; Reinecke, M.; Collins, V.P.; von Holst, H
Cancer Res. 53, 2475-2478, 1993
A; Title: Characterization of insulin-like growth factor 1 in human primary brain tumo
A; Reference number: A48960; MUID:93265440
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A) Cross-references: 6B:X00173; NID:g33015; PIDN:CAA24998.1; PID:g33016
A) Cross-references: 6B:X00173; NID:g33015; PIDN:CAA24998.1; PID:g33016
A):Note: Met-24 is proposed as a likely initiator
R; Steenbergh, P.H.; Koonen-Reemst, A.M.C.B.; Cleutjens, C.B.J.M.; Sussenbach, J.S.
Biochem. Biophys. Res. Commun. 175, 507-514, 1991
A) Steenbergh of the high molecular weight human IGF-I mRNA.
A); Reference number: JT0571; MUID:91207342
                                                                                                                                               A;Cross-references: GB:X03420; GB:X00362; NID:g33020; PIDN:CAA27152.1; PID:g33021; R;Jansen, M.; van Schaik, F.M.A.; Ricker, A.T.; Bullock, B.; Woods, D.E.; Gabbay, K Nature 306, 609-611, 1983
A;Title: Sequence of cDNA encoding human insulin-like growth factor I precursor. A;Reference number: A93321; MUID:84068210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A,Title: Complete characterization of the human IGF-I nucleotide sequence isolated A,Reference number: A23622; MUID:86108910
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A; Note: sequence extracted from NCBI backbone (NCBIN:133056, NCBIP:133057)
A; Note: sequence inconsistent with the nucleotide translation
R; Rall, L.B.; Scott, J; Bell, G.I.
Meth. Enzymol. 146, 239-248, 1987
A; Title: Human insulin-like growth factor I and II messenger RNA: isolation of A; Reference number: I57044; MUID:88065102
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A;Molecule type: mRNA
A;Residues: 24-153 <RALD
A;Cross-references: GB:M29644; NID:g183119; PIDN:AAA52543.1; PID:g183120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: EMBL:X57025; NID:g33007; PIDN:CAA40342.1; PID:g33008 R;Le Bouc, Y.; Dreyer, D.; Jaeger, F.; Binoux, M.; Sondermeyer, P. FEBS Lett. 196, 108-112, 1986
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A; Molecule type: protein
A; Residues: 49-53, X',55-65, X', 67-75 <KAR>
A; Experimental source: platelet lyses, M.; Sara, V.R.
Submitted to the EMBL Data Library, November 1990
A; Description: Nucleotide sequence of the human fetal brain IGF-la.
A; Reference number: $30519
A; Accession: $30519
A; Status: preliminary
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A;Residues: 1-123, E', 125-132, E', 134-153 <SAN>
A;Cross-references: GB.X56773; GB.561841; NID:93298
A;Experimental source: anaplastic oligodendroglioma
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A; Residues: 49-118 <br/>
R; Rarey, K.P.; Marquardt, H.; Sirbasku, D.A.<br/>
B; Rarey, K.P.; Marquardt, H.; Sirbasku, D.A.<br/>
B; Rarey, R.P.; Marquardt, H.; Sirbasku, D.A.<br/>
A; Title: Human platelet-derived mitogens. Id<br/>
A; Reference number: A60483; MUID:89323462
                                                                                                         A; Residues: 24-153 <DEP>
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A; Residues: 1-153 <STE>
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              A; Accession: A23614
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N;Alternate names: IGF-I long splice form precursor; IGF-IA: somatomedin C
C;Species: 10mo saplens (man)
C;Date: 24-Apr-1984 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000
C;Accession: A95581; A23614; A93321; JT0571; A23622; A92226; A60483; S30519; A48960; I57
R;Rotwein, P: Pollock, K.M.; Didier, D.K.; Krivi, G.G.
J. Blol. Chem. 261, 4628-4832, 1986
A;Title: Organization and sequence of the human insulin-like growth factor I gene. Alter
A;Rocession: A92581
A;Molecule type: DNA
A;References number: A92581; MUID:86168194
A;Rocession: A92381
A;Molecule type: DNA
A;Residues: I-153 <ROT>
A;Cross-references: GB:M14156; NID:9183107; PIDN:AAA52538.1; PID:9183110
B;Gerence number: P: van Schaik, F.M.A.; Verduijn, G.M.; van Ommen, G.J.B.; Bouma
FEBS Lett. 195, IT9-144, 1986
A;Title: Organization of the human genes for insulin-like growth factors I and II.
A;Reference number: A91356; MUID:86108862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C; Decession: A3652
C; Accession: A3652
Mol. Endocrinol. 4, 1914-1920, 1990
A; Tubin, C and C an
C; Superfamily: insulin
C; Sequencia: glycoprotein; growth factor; plasma
C; Sequencia: glycoprotein; growth factor is described.
E; 3.102/Product: insulin-like growth factor I #status predicted <MAT>
E; 33-102/Product: insulin-like growth factor I #status predicted <MHD>
E; 33-102/Product: insulin chain B-like #status predicted <CHD>
E; 34-94/Domain: insulin chain A-like #status predicted <CHC>
E; 74-94/Domain: Deptide #status predicted <CHD>
E; 103-137/Domain: carbohydrate (Asn) (covalent) #status predicted <CHD>
E; 124/Binding site: carbohydrate (Asn) (covalent) #status predicted
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C;Species: Homo sapiens (man)
C;Date: 12-Apr-1991 #sequence_revision 12-Apr-1991 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;: Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               33 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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Pred. No. 1.3e-41;
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100.0%; Pred. No. 1...
... 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity 100.
Les 86; Conservative
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Matches 86; Conservative
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National and series is sometomed in C C; Species: Bos primigentus taurus (cattle)
C; Species: Bos primigentus cannon; F: Requence 18-Jun-1999
C; Accession: S12672; A25633; South Fortile: Nucleotide sequence of the bovine insulin-like growth factor 1 (IGF-1) and in A; Reference number: S12672; MUID:90175014
A; Restdues: S12672
A; Restdues: 1-153 <-POT>
A; Restdues: 1-153 <-POT>
A; Cross-references: EMBL:X15726; NID:9454; PIDN:CAA33746.1; PID:9455
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R:Honegger, A.; Humbel, R.E.
D: Biol. Chem. 261, 569-575, 1986
A;Title: Insulin-like growth factors I and II in fetal and adult bovine serum. Purifi A;Reference number: A92585; MUID:86085881
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R:Delafontaine, P.: Lou, H.; Harrison, D.G.; Bernstein, K.E.
Gene 130, 305-306, 1993
A: Title: Sequence of a cDNA encoding dog insulin-like growth factor I.
A: Reference number: PN0622, MUID:93366192
A: Accession: PN0622
A: Accession: PN062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Species: Canis lupus familiaris (dog)
C;Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 07-May-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGLVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                  F;49-153/Product: insulin-like growth factor IA #status experimental <MAT>
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    bovine (fragment)

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                                                                                                                                                                                                                                                                                                                                                                          3.3e-41;
5;
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Pred. No. 3.9e-41;
0; Mismatches 1;
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                                                              C;Superfamily: insulin
C;Reywords: growth factor
F:1-22_Domain: signal sequence #status predicted <:
F:23-48/Domain: propeptide #status predicted <PRO>
                                                                                                                                                                                                                                                                                                                                                               77.7%; Score 464.5;
87.3%; Pred. No. 3.3e
live 1; Mismatches
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Best Local Similarity 98.8%;
Matches 85; Conservative
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Matches 89; Conservative
                    A; Introns: 21/3; 74/1
                                                                                                                                                                                                                                                                                                                                                                    Query Match
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C.Species: Sus scrofa domestica (domestic pig)
C.Species: Sus scrofa domestica (domestic pig)
C.Accession: 512825; 521488; A60738
C.Accession: 512825; S21488; A60738
C.Accession: 512825; MUD: 90221822
A.Reference number: 512825; MUD: 90221822
A.Reference number: 512825; MUD: 90221822
A.Residues: 1-153 < MUE>
A.Residues: 1-154 < MUE>
A.Re
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A.Residues: 'Y', 21-153 - TAV>
A.Residues: 'Y', 21-153 - TAV>
A.Cross-references: GB: M31175
B.Francis, G.L.; Owens, P.C.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.
J. Endocrinol. 122, 681-687, 1989
J. Endocrinol. 122, 681-687, 1989
A.Title: Purffication, amino acid sequences and assay cross-reactivities of porcine insu A.Reference number: A60738; MUID: 90039035
A.Anceesion: A60738
A.Molecule type: protein
A.Residues: 49-117,'X' <FRA>
C.Genetics:
C;Comment: The insulin-like growth factors, isolated from plasma, are structurally and C;Comment: For an alternative splice form, see PIR:IGHUIB.
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R;Tavakkol, A.; Simmen, F.A.; Simmen, R.C.M.
Mol. Endocrinol. 2, 674-681, 1988
A;Title: Porcine insulin-like growth factor-I (pIGF-I): complementary deoxyribonucleic
                                                                                                                                                                                                                                        A.Map position: 12q22-12q4.1
A.Introns: 21/3; 74/1; 134/3
C.Superfamily: insulin
C.Keywords: alternative splicing; growth factor; plasma
C.Keywords: alternative splicing; growth factor plasma
F.1-21/Domain: signal sequence #status predicted <SIGN
F.22-48/Domain: propectide #status predicted <PRON-
F.49-118/Product: insulin-like #status experimental <CHEN-
F.49-77/Domain: insulin chain B-like #status experimental <CHEN-
F.78-89/Domain: insulin chain B-like #status experimental <CHEN-
F.78-118/Domain: insulin chain A-like #status experimental <CHEN-
F.78-118/Domain: ansulin chain B-like #status experimental <CHEN-
F.78-119-153/Domain: arboxyl-terminal propeptide (E peptide) #status predicted <CPRON-
F.54-96,66-109,95-100/Disulfide bonds: #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 insulin-like growth factor I precursor - pig
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A;Residues: 1-21 <DIC>
                                                                                                                                                                                                         A; Cross-references:
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                                                                                                                                                           A; Gene: GDB: IGF1
                                                                                                                 C;Genetics:
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insulin-like growth factor I precursor, 'splice form 1 - sheep
NiAlternate names: somatomedin C
C; Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C; Date: 09-Mar. 1990 #sequence_revision 27-Peb-1997 #text_change 23-Jul-1999
C; Accession: S22877; A33390; S07965; S07198
C; Accession: S22877; A33390; S07965; S07198
Nol. Endocrinol. 6, 17-31, 1991
A; Title: The ovine insulin-like growth factor-I gene: characterization, expression an A; Reference number: S22877; MuID: 91197361
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A; Residues: 1-43,'SS',46-154 <WON>
A; Cross-references: GB:M30653; NID:G165929; PIDN:AAA80532.1; PID:g165930
A; Cross-references: CB:M30653; NID:Grown, R.J.; Thorburn, G.D.
Biochim. Biophys. Acta 997, 27-35, 1989
A; Title: Simultaneous isolation of insulin-like growth factors I and II from adult sh
insulin-like growth factor I precursor, splice form 2 - sheep
C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C;Date: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 23-Jul-1999
C;Accession: S22878; S07198
R;Dickson, M.C.; Saunders, J.C.; Gilmour, R.S.
J. Mol. Endocrinol. 6, 17-31, 1991
A;Title: The ovine insulin-like growth factor-I gene: characterization, expression an A;Reference number: S22877; MUID:91197361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: EMBL:X51358
A;Cross-references: EMBL:X51358
R;Francis, G.L.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.
Endocrinology 124, 1173-1183, 1989
A;Title: Sheep insulin-like growth factors I and II: sequences, activities and assays
A;Reference number: S07198; MUID:89136887
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Cisuperfamily: insulin
Cisuperfamily: insulin
Cisuperfamily: insulin
Cisuperfamily: propeptide #status predicted <PRO>
Fif-33/Domain: propeptide #status predicted <PRO>
Fif-34-103/Product: insulin-like growth factor I (active) #status experimental <MAT>
Fif-34-103/Product: insulin chain B-like #status predicted <DOB>
Fif-37-4/Domain: insulin connecting peptide-like #status predicted <CHC>
Fif-37-4/Domain: insulin chain A-like #status predicted <CHC>
Fif-59-5/Domain: peptide D #status predicted <CHC>
Fif-6-103/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>
Fif-39-81,51-94,80-85/Disulfide bonds: #status predicted
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Pred. No. 3e-40;
0; Mismatches
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Best Local Similarity 97.7%;
Matches 84; Conservative
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A;Residues: 1-154 <DIC>
A;Cross-references: EMBL:X51358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Accession: S07198
A; Molecule type: protein
A; Residues: 34-103 <FRA>
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A; Residues: 1-138 <DIC>
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                              A. Residues: 49-118 CHON>
R. Residues: 49-118 CHON>
R. Residues: 49-118 CHON>
R. Fractions: 40-118 CHON>
R. Fractions: 40-118 CHON>
R. Fractions: 40-118 CHON>
R. Fractions: 40-118 CHON F. W.; Ballard, F.J.; McNeil, K.A.; Wallace, J.C.
Biochem. J. 251, 95-103, 1988
A. Fitle: Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences and biologic
A. Reference number: $80465; Muid:88268820
A. Recession: $80486; Muid:88268820
B. P. Leconain: $80486; Muid:88268820
B. P. Lill-Lill Recession: $80486; Muid: $8048
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Blosci. Blotechnol. Blochem. 59, 87-92, 1995
Title: Dynamic aspects in the expression of the goat insulin-like growth factor-I (IGF eference number: UC2483; MUID:95201385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Molecule type: mRNA
A;Residues: 1-154 <MIK>
A;Cross-references: GB:S11378; DDBJ:D26116; DDBJ:D26117; DDBJ:D26118; DDBJ:D26119
C;Genetics:
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C;Species: Capra aegagrus hircus (domestic goat)
C;Date: 16-Mar-1995 #sequence_revision 26-May-1995 #text_change 17-Mar-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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C; Superfamily: insulin
F;1-49/Domain: signal sequence #status predicted <SIG>
F;50-119/Product: insulin-like growth factor-I #status predicted <MAT>
F;120-154/Region: E domain
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98.8%; Pred. No. 4.8e-41;
tive 0; Mismatches 1
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Best Local Similarity 98.8
Matches 85, Conservative
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A; Molecule type: mRNA
A; Residues: 'MSAPP',22-153 <KA2>
A; Residues: 'MSAPP',22-153 <KA2>
A; Residues: 'MSAPP',22-153 <KA2>
A; Experimental Source: liver
A; Note: the authors present evidence that this mRNA may contain an artifactual invers
B; Tamura, K.; Kobayashi, M.; Ishii, Y.; Tamura, T.; Hashimoto, K.; Nakamura, S.; Niwa
J; Elol. Chem. 264, 5616-5621, 1989
A; Title: Primary Structure of rat insulin-like growth factor-I and its biological act
A; Reference number: A32857; MUID:89174609
                                                                                                                                                                                                                                                                            R;Kato, H.; Takenaka, A.; Miura, Y.; Nishiyama, M.; Noguchi, T.
Agric. Biol. Chem. 54, 2225-2230, 1990
A;Title: Evidence of introduction by molecular cloning of artificial inverted sequenc A;Reference number: JN0088; MUID:91136779
A;Accession: JN0088
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C. Species: Mis musculus (house mouse)
C. Date: 30-Jun-1988 #sequence_revision 30-Jun-1988 #text_change 16-Jul-1999
C. Date: 30-Jun-1988 #sequence_revision 30-Jun-1988 #text_change 16-Jul-1999
C. Accession: A55540; 155295; 159090; N.M.; Rall, L.B.
Nucleic Acids Res. 14, 7873-7882, 1986
A.Title: Sequences of liver cDNAs encoding two different mouse insulin-like growth fa A. Reference number: A93643; MUID:87040760
A. Accession: A5540
A. Molecule type: mRNA
A. References CBEXO4480; NID:951801; PIDN:CAA28168.1; PID:951802
B. Tollefsen, S.E.; Lajara, R.; McCusker, R. H.; Clemmons, D.R.; Rotwein, P. J. Biol. Chem. 264, 13810-13817, 1989
A. Title: Insulin-like growth factors (IGF) in muscle development. Expression of IGF-I A. Reference number: 155295; MUID:89340472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A,Molecule type: protein
A;Residues: 49-118 <TAM>
R;Canalis, E.; McCarthy, T.; Centrella, M.
Ricanalis, E.; McCarthy, T.; Centrella, M.
A;Title: Isolation and characterization of insulin-like growth factor I (somatomedin-A;Reference number: A61096; MUID:88082445
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A; Residues: 49-108 <RES>
A; Residues: 69-108 <RES>
A; Residues: 68-108 <ARES>
B; Mathews, L.S.; Norstedt, G.; Palmiter, R.D.
Proc. Natl. Acad. Sci. U.S.A. 83, 9343-9347, 1986
A; Title: Regulation of insulin-like growth factor I gene expression by growth hormone
                                a rat complementary deox
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                                                                                                                                               A; Molecule type: mRNA
A; Residues: 46-153 <MUR>
A; Cross-references: GB:M1714; NID:9204324; PIDN:AAA41227.1; PID:9204325
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A,Molecule type: protein
A,Residues: 49-53,'x',55-65 <CAN>
C,Superfamily: insulin
C,Keywords: alternative splicing; growth factor
E,49-118/Product: insulin-like growth factor I #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .;
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                  A; Title: Identification, characterization, and regulation of A; Reference number: A28504; MUID:87246437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 75.3%; Score 450; DB 2; L
Best Local Similarity 95.3%; Pred. No. 1.1e-39;
Matches 82; Conservative 1; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Status: preliminary; translated from GB/EMBL/DDBJ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       109 CAPLKPTKSARSIRAQRHTDMPKTQK 134
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                                                                                                     A; Accession: A28504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Accession: A32857
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                                                                A. Wolecule type: protein
A. Residues: 50-79 <a href="https://www.ncess.nc.">https://www.ncess.nc.</a>
A. Wolecule type: protein
A. Residues: 50-79 <a href="https://www.ncess.nc.">https://ww.ncess.nc.</a>
A. Francis, 6.1.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.
Endocrinology 124, 1133-1183, 1989
A. Title: Sheep insulin-like growth factors I and II: sequences, activities and assays.
A. Reference number: 807198; MUD:89136887
A. Ancession: 807198
A. Molecule type: protein
A. Molecule type: protein
A. Molecule type: protein
A. Molecule type: protein
A. Mesidues: 50-119 <a href="https://www.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.ncess.nc
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A.Gross-references: GB:M15651; GB:J02743; NID:g204297; PIDN:AAA41215.1; PID:g204300
R.Caross-references: GB:M15651; GB:J02743; NID:g204297; PIDN:AAA41215.1; PID:g204300
R.Casella, S.J.; Smith, E.P.; Van Wyk, J.J.; Joseph, D.R.; Hynes, M.A.; Hoyt, E.C.; Lund
DNA 6, 325-330, 1987
A.Title: Isolation of rat testis cDNAs encoding an insulin-like growth factor I precurse
A.Reference number: A27849; MUID:88003970
A.Recession: A27849
A.Accession: A27849
A.Accession: A27849
A.Accession: A27849
A.Residues: 27-153 < CAs>
A.Cass-references: GB:M17335; NID:g204751; PIDN:AAA41386.1; PID:g204752
A.Cross-references: GB:M17335; NID:g204751; TIDN:AAA41386.1; PID:g204752
A.Cross-references: GB:M17335; NID:g1001; 1990
A.Title: A new CDNA clone relating to larger molecular species of rat insulin-like growth
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N.Alternate names: IGF-IA; somatomedin C
C; Species: Rattus norvegicus (Norway rat)
C; Species: Rattus norvegicus (Norway rat)
C; Date: 16-Mar-1989 #sequence_revision 16-Mar-1989 #text_change 21-Jul-2000
C; Accession: B27804; A2789; JH0133; A28504; JN0088; A32857; A61096
R; Shimatsu, A.; Rotwein, P
J. Biol. Chem. 262, 7884-7900, 1987
A; Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence, AREference number: A27804; MUID:87222423
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Abloeucle type: mRNA
A skatdues: 27-153 cKar>
A:Cross-references: GB:D00698; NID:g220780; PIDN:BAA00604.1; PID:g220781
A:Experimental source: liver
B:Murphy, L.J.; Bell, G.I.; Duckworth, M.L.; Friesen, H.G.
Endocrinology 121, 684-691, 1987
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Pred. No. 3.3e-40;
0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
A; Reference number: S04972; MUID: 89323215
A; Accession: S07965
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 76.1%;
Best Local Similarity 97.7%;
Matches 84; Conservative
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Length 127;
                                                                                                                            hery Match 74.7%; Score 447; DB 2; Length 12. Best Local Similarity 94.2%; Pred. No. 1.9e-39; Matches 81; Conservative 2; Mismatches 3; Indels
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1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60 q δλ

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Gaps

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61 CAPLKPAKSARSVRAQRHTDMPKTQK 86 Ω

qq

Search completed: October 25, 2002, 15:59:28 Job time: 13.5904 secs

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GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
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OM protein - protein search, using sw model

October 25, 2002, 15:52:51; search time 6.62651 Seconds (without alignments) 642.745 Million cell updates/sec Run on:

Title: Perfect score:

US-09-852-261-2 598 1 GPETLCGAELVDALQFVCGD.....STNKNTKSQRRKGSTFEEHK 110 Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

105224 seqs, 38719550 residues rched:

105224 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_40:* Database : Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	222 0	P05019 homo sapien	œ	P08024 rattus norv	7	P01343 homo sapien		P33712 canis famil		_	3	P08025 rattus norv	P05017 mus musculu	coturn	gallus	xenopus		_			_	Q90325 cyprinus ca	Q02816 oncorhynchu	P10764 ovis aries		P07456 bos taurus	P09535 mus musculu	P41694 mustela vis	P01344 homo sapien	P01346 rattus norv	P51459 equus cabal	3695 sus sci	P33717 gallus gall
SUMMARIES	ID	IGF1_RABIT	IGFB_HUMAN	IGFB_MOUSE	IGFB_RAT	IGF1_CAVPO	IGFA_HUMAN	IGF1_PIG	- 1	IGF1_BOVIN	IGF1_CAPHI	IGF1_SHEEP	IGFA_RAT	IGFA_MOUSE	IGF1_COTJA	IGF1_CHICK	IGF1_XENLA	IGF1_SUNMU	IGF1_HORSE	IGF1_ONCKI	IGFB_CYPCA	IGF1_ONCMY	IGFA_CYPCA	IGF2_ONCMY	IGF2_SHEEP	IGF2_CAVPO	IGF2_BOVIN	IGF2_MOUSE	IGF2_MUSVI	IGF2_HUMAN	IGF2_RAT	IGF2_HORSE	IGF2_PIG	IGF2_CHICK
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	Score	572.5	260	521.5	494	468	468	464.5	463	463	459	455	450	447	422	422	419.5	414	403	401	399.5	398	393.5	264.5	241	235	235	233	232.5	231	229.5	229	228	222
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P22618 myxine glut P07453 myoxocephal										
IGF_MYXGL	INS_GADCA	INS1_BATSP	INS2_BATSP	INS_HYDCO	INS_CHIBR	INS_ZAODH	INS_ALLMI	INS2_THUTH	INS_ANSAN	INS_CROAT
		Н	Н	_	-	_	Н	-	7	Н
139	27	51	20	59	51	51	21	51	51	51
36.7	26.5	26.0	25.8	25.3	24.9	24.9	24.7	24.5	24.4	24.4
219.5	158.5	155.5	154	151	149	149	148	146.5	146	146

ALIGNMENTS

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BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
YOPPSTNKKMKSORRKGSTFEEHK -> EVHLKNTSRGSA
GNRNYRM (IN ISOFORM IGF-IA).
91 MW; 819AF577800A1B1A CRC64;
                                                                                              Gaps
                                                                                                                9
                                                                                                                                  92
                                                                                                                                                                                                                                                                                                                                       MEDLINE-86168194; PubMed-2937782;
Rotwoln P., Pollock K.M., Didler D.K., Krivi G.G.;
"Organization and sequence of the human insulin-like growth factor I
gene. Alternative RNA processing produces two insulin-like growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-78130171; PubMed-632300;
Rinderknecht E., Humbel R.E.;
The amino acid sequence of human insulin-like growth factor I and
its structural homology with proinsulin.";
J. Biol. Chem. 253:2769-2776(1978).
                                                                                                                         1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                   "Two insulin-like growth factor I messenger RNAs are expressed in
                                                                                                                                                                                                                                  13-AUG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence update)
13-DEC-1998 (Rel. 37, Last annotation update)
Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin C).
IGF1 OR IBP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          de Pagter-Holthuizen P., van Schaik F.M.A., Verduijn G.M., van Ommen G.J.B., Bouma B.N., Jansen M., Sussenbach J.S.; "Organization of the human genes for insulin-like growth factors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-84295593; PubMed-6382022;
Dull T.J., Gray A., Hayflick J.S., Ullrich A.;
"Insulin-like growth factor II precursor gene organization in
relation to insulin gene family.";
                                                                                                                                                             61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
                                                                             .5;
6.9e-54;
2;
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                                                                           Score 572.5; I
Pred. No. 6.9e-
1; Mismatches
                                                                                                                                                                                                                   195 AA
                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                            factor I precursor peptides.";
J. Biol. Chem. 261:4828-4832(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. MEDLINE-86108862; PubMed-3002851;
                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
MEDLINE-86094355; PubMed-3455760;
                                                        16091 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEBS Lett. 195:179-184(1986).
                                                                          95.7%;
ilarity 96.4%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 22-50 FROM N.A.
                                                                                                                                                                                                                   STANDARD;
  102
80
93
84
143
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3D-STRUCTURE MODELING.
                                                        143 AA;
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                                                                                    Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                             human liver.
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P05019;
                                                                                            Matches 107;
  DOMAIN
DISULFID
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This SWISS-PROT entry is copyright. It is produced through a collaboration
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DISULPIDE BONDS.

MEDLINE—89207850; PubMed=3242681; ' ichter W.J., Merryweather J.P.; Mascriborf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.; Mascriborf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.; Location of disulphide bonds in human insulin-like growth factors (IGFs) synthesized by recombinant DNA technology."; Blomed. Environ. Mass Spectrom. 165.3-6(1988).

-!- FUNCTION: THE INSULIN-LIKE GROWTH PACTORE.

--- RUNCTION: THE INSULIN-LIKE GROWTH PACTORE.

--- SUBCELLULAR LOCATION: Secreted.

--- SUBCELLULAR LOCATION: Secreted.

--- ALTERNATIVE PRODUCTS: TWO FORMS OF IGF-1, IGF-IA AND IGF-IB ARE PRODUCED BY ALTERNATIVE SPLICING.

--- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sato A., Nishimura S., Ohkubo T., Kyogoku Y., Koyama S., Kobayashi M., Yasuda T., Kobayashi Y.; "IH-NMR assignment and secondary structure of human insulin-like growth factor-I (IGF-I) in solution."; J. Biochem. 111:529-536(1992).
                                                                                                                                                                                                                                              Cooke R.M., Harvey T.S., Campbell I.D.;
"Solution structure of human insulin-like growth factor 1: a nuclear magnetic resonance and restrained molecular dynamics study.";
Bliochemistry 30:5484-5491(1991).
                         Blundell T.L., Bedarkar S., Humbel R.E.;
"Tertiary structures, receptor binding, and antigenicity of
insulinlike growth factors.";
Fed. Proc. 42:2592-2597(1983).
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Insulin family; Growth factor; 3D-structure; Plasma; Alternative splicing; Signal.
SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IPR000739; Insulin_IGF_relaxin.
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SMART; SM00078; IIGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                     STRUCTURE BY NMR. MEDLINE=92316903; Pubmed=1319992;
MEDLINE-83210259; PubMed-6189745;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAA52537.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               M14153; AAA52537.1;
M14154; AAA52537.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAA52539.1;
CAA27250.1;
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X03422; CAA27154.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00049; Insulin; I. PRINTS; PR00276; INSULINA. PRINTS; PR00277; INSULINB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             X03420; CAA27152.1;
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A26181; A26181.
S30540; S30540.
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PDB; 3GF1; 15-APR-93
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EMBL; X03563;
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EMBL;
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INSULIN-LIKE GROWTH FACTOR IB.

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Biol. Chem. 262:7894-7900(1987).
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MEDLINE-87222423; PubMed=3034909;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=88015572; PubMed=3658684;
                                                                                                                                                                                                                                                                    2;
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(Rel. 17, Last sequ
(Rel. 39, Last anno
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                                                                                                                                                                                                                                                87.2%;
89.2%;
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Best Local Similarity 89.27
Matches 99; Conservative
                                                                                 ; INSULINB
                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
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51
63
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133
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74
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23
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01-FEB-1991 (
30-MAY-2000 (
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                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bell G.I., Stempton M.M., Pong N.M., Rall L.B.;
"Sequences of liver cDNAs encoding two different mouse insulin-like
growth factor I precursors.";
Nucleic Acids Res. 14:7873-7882(1986).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
-!- SUBCELLULAR LOCATION: Secreted.
-!- SUBCELLULAR LOCATION: Secreted.
-!- ALTERNATIVE PRODUCTS: I ISOFORM IGF-IA (AC POSO17) AND
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                 49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                              1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                            0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus.
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                       13-AUG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin)...
IGF1 OR IGF-1.
                                                                                                                                                                                                                                       Length 195;
                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                     E88A8CFBD1CD1873 CRC64;
                                                                                                                                                                                                                                                                                                                    61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKG 103
                                                                                                                                                                                                                                                                                                                             109 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKG 151
                                                                                                                                                                                                                                       93.6%; Score 560; DB 1;
100.0%; Pred. No. 2e-52;
iive 0; Mismatches 0
                                           PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-87040760; PubMed-3774549;
B D Y C B
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Best Local Similarity 100.
Matches 103; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (Mouse)
                                                                                                                                                                                                          109
195 AA;
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                                                                                                                                                                                                                                                                                                                                                                                    IGFB_MOUSE
P05018;
                                                  DISULFID
                                                                     DISULFID
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ID IGFB_M
AC P05018
DT 13-AUG
DT 30-MAY
DE Insuli
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 82
                                                                                                                                                                                                                                                                                                          PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
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MEDLINE=89127259; PubMed=3221878;
Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Leroith D.;
"Structure of the rat insulin-like growth factor II transcriptional unit: heterogeneous transcripts are generated from two promoters by use of multiple polyadenylation sites and differential ribonucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Shimatsu A., Rotwein P.; "Mosaic evolution of the insulin-like growth factors. Organization, sequence, and expression of the rat insulin-like growth factor I dene.":
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Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin).
IGF1 OR IGF-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1; Length 133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
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C.
D.
E PEPTIDE.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
W; B8ESCO5B88D62502 CRC64;
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Pred. No. 1.6e-48;
; Mismatches 9
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EMBL; X04482; CAA28170.1; -.
PIR; B25540; B25540.
HSSP; P05019; IGF1.
MGD; MGI:96432; Igf1.
InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
                                                                                                                                                                                                                                             ProDom; PD001048; Insulin_IGF_relaxin; SMART; SMO0078; IlGF; 1.
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130 AA

STANDARD;

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IGF1_CAVPO
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                                     MEDLINE-89174609; Pubmed-2538424;

Tamura K., Kobayashi M., Ishii Y., Tamura T., Hashimoto K.,

Nakamura S., Niwa M., Zapf J.;

"Primary structure of rat insulin-like growth factor-I and its

biological activities.",

J. Biol. Chem. 264:5616-5621(1989).

-! FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,

ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A

MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-! SUBCELLULAR LOCATION: Secreted.

-! SIBCELLULAR LOCATION: Secreted.

-! SIBCENDIAR IGF-IB (SHOWN HERE): ARE PRODUCED BY ALTERNATIVE SPLICING.

-! SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               49 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 494; DB 1; Length 181; Pred. No. 1.8e-45;
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APL -> VRC (IN REF. 2).
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Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A.
D.
E PEPTIDE.
acid splicing.";
Mol. Endocrinol. 2:1115-1126(1988).
                                                                                                                                                                                                                                                                                                 EMBL; M15648; AAA41214.1; JOINED.
EMBL; M15649; AAA41214.1; JOINED.
EMBL; X06107; CAA29480.1; ALT_SEQ.
EMBL; M15480; AAA41385.1; ALT_SEQ.
                                                                                                                                                                                                                                                                             EMBL; M15650; AAA41214.1; -.
EMBL; M15647; AAA41214.1; JOINED.
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PIR; A26859; A26859.
PIR; A32857; A32857.
HSSP; P05019; 1GF1.
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RESULT 5 IGF1_CAVPO

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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26 GPETLCGAELVDALQFVCGDRGFYFNRPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 85
                                                                                                                                                                                                                                                                                                                                                                                    Bell G.I., Stempien M.M., Fong N.M., Scino S.;
"Sequence of a cDNA encoding guinea pig IGFI.";
"Nucleic Acids Res. 18.4275,4275,1990).
"I- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTUBALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
MUCH HIGHER GROWTH-PROMOTION SCCTUTTY.

SUBCELLULAR LOCATION: Secreted.
                                                                                                                                              Cavia porcellus (Guinea pig).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
01-AUG-1990 (Rel. 15, Created)
01-AUG-1990 (Rel. 15, Last sequence update)
01-FEB-1994 (Rel. 28, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INSULIN-LIKE GROWTH FACTOR I.
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BY SIMILARITY.
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W; 251B20AEDC5729FF CRC64;
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HSSP: P05019; IGF1.
Interpro: IPR000799; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
PR0SITE; PS00262; INSULIN; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                     MEDLINE-90332447; PubMed-2377480;
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P01343;
21-JUL-1986 (Rel. 01, Created)
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Best Local Similarity 100.

Matches 86; Conservative
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                                                                                                                                                                                                                                        NCBI_TaxID=10141;
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IGFA_HUMAN
ID IGFA_HU
AC P01343;
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Sandberg Nordqvist A.C., Stahlbom P.A., Lake M., Sara V.R.; 
"Characterization of two cDNAs encoding insulin-like growth factor 
"IGF-1) in the human fetal brain "; 
Brain Res. Mol. Brain Res. 12:275-277(1992).
                                                                                                                                                                                                                                       Rotwein P., Pollock K.M., Didier D.K., Krivi G.G.; "Organization and sequence of the human insulin-like growth factor gene. Alternative RNA processing produces two insulin-like growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-78130171; PubMed-632300; Rinderknecht E., Humbel R.E.; "The amino acid sequence of human insulin-like growth factor I and
                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-84068210; PubMed-6358902;
Jansen M., van Schalk F.M.A., Ricker A.T., Bullock B., Woods D.E.,
Gabbay K.H., Nussbaum A.L., Sussenbach J.S., van den Brande J.L.;
"Sequence of cDNA encoding human insulin-like growth factor I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          le Bouc Y., Dreyer D., Jaeger F., Binoux M., Sondermeyer P.; Complete characterization of the human IGF-I nucleotide sequence isolated from a newly constructed adult liver cDNA library."; FEBS Lett. 196:108-112(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
MEDLINE=86108862; PubMed=3002851;
MEDLINE=86108862; PubMed=3002851;
Van Ommen G.J.B., Van Schaik F.M.A., Verduijn G.M.,
van Ommen G.J.B., Bouna B.N., Jansen M., Sussenbach J.S.;
"Organization of the human genes for insulin-like growth factors
                                                                                                             Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Complete nucleotide sequence of the high molecular weight human IGF-I mRNA.";
    sequence update)
annotation update)
IA precursor (IGF-IA) (Somatomedin C)
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Dull T.J., Gray A., Hayflick J.S., Ullrich A.;
"Insulin-like growth factor II precursor gene organization in relation to insulin gene family.";
Nature 310:777-781(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Steenbergh P.H., Koonen-Reemst A.M.C.B., Cleutjens C.B.J.M., Sussenbach J.S.;
                                                                               Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutele
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  iochem. Biophys. Res. Commun. 175:507-514(1991)
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Biol. Chem. 253:2769-2776(1978).
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                                                                                                                                                                                                                                                                                                           factor I precursor peptides.";
J. Biol. Chem. 261:4828-4832(1986).
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MEDLINE=83210259; PubMed=6189745;
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13-AUG-1987 (Rel. 05, Last
15-DEC-1998 (Rel. 37, Last
                                        Insulin-like growth factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nature 306:609-611(1983).
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                                                                    IGF1 OR
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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growth factors
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                                                                                                                                                                                                                                                                                   nuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=89207850; PubMed=3242681; Richter W.J., Merryweather J.P Raschdorf F., Dahlinden R., Maerki W., Richter W.J., Merryweather J.P Raschdorf F., Dahlinden R., Maerki W., Richter W.J., Merryweather J.P (IGFs) synthesized by recombinant DNA technology."; Biomed. Environ. Mass Spectrom. 16:3-8(1988).

-I- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA, ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A WUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-I- SUBCELLULAR LOCATION: Secreted.
-I- ALTERNATIVE PRODUCTS: TWO FORMS OF IGF-1, IGF-IA AND IGF-IB ARE PRODUCED BY ALTERNATIVE SPLICING.
-I- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                         Cooke R.M., Harvey T.S., Campbell I.D.;
"Solution structure of human insulin-like growth factor 1: a magnetic resonance and restrained molecular dynamics study.";
Biochemistry 30:5484-5491(1991).
                                             of
Blundell T.L., Bedarkar S., Humbel R.E.;
"Tertiary structures, receptor binding, and antigenicity insulinlike growth factors.";
Fed. Proc. 42:2592-2597(1983).
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PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
PRODOUTS; INSULINA.
SMART; SM00078; Insulin_IGF_relaxin; 1.
FROSITE; PS00262; INSULIN; 1.
Insulin familly; Growth factor; Plasma; 3D-structure;
Alternative splicing; Signal.
21 POTENTIAL.
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EMBL, M12659; AAA52538.1; JOINED.
EMBL, M14153; AAA52538.1; JOINED.
EMBL, M14154; AAA52538.1; JOINED.
EMBL, X00173; CAA24998.1; -...
EMBL, X03563; CAA274998.1; -...
EMBL, X03420; CAA27152.1; -...
EMBL, X03421; CAA27153.1; -...
EMBL, X03422; CAA27153.1; -...
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2GF1; 15-APR-93.
3GF1; 15-APR-93.
147440; -
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A23622; A23622.
S30519; S30519.
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expression of alternate transcription sites.";
J. Mol. Endocrinol. 11:201-211(1993).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
   'The porcine insulin-like growth factor-I
                                                                                                                                                                                                                                                                                                                                                                                          17010 MW;
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87.38;
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PRINTS; PR00277; INSULINB.
                                                                                                                                                                                                                                Pfam; PF00049; Insulin; 1
                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 87.3
Matches 89; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
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MEDLINE-94128209; Pubmed-8297476;
Weller P.A., Dickson M.C., Huskisson N.S., Dauncey M.J., Buttery P.J.,
                                                                                                                                                                                                                                                                         Gaps
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"Porcine insulin-like growth factor-I (pIGF-I): complementary deoxyribonucleic acid cloning and uterine expression of messenger ribonucleic acid encoding evolutionarily conserved IGF-I peptides.";
Mol. Endocrinol. 2:674-681(1988).
                                                                                                                                                                                                                                                                1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
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SEQUENCE FROM N.A.
MEDLINE-90221822; PubMed=2326169;
Mucleotide sequence of porcine insulin-like growth factor. 1:5'
untranslated region, exons 1 and 2 and mRNA.";
Nucleic Acids Res. 18:364-364(1990).
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01-AUG-1990 (Rel. 15, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
                                                                                                                                                                                                                                Length 153;
          INSULIN-LIKE GROWTH FACTOR IA.
                                                                                                                                                                                                                             78.3%; Score 468; DB 1; Length 15
100.0%; Pred. No. 8.8e-43;
ive 0; Mismatches 0; Indels
                                                                                                                                                                                                            17026 MW; C6ECD92DCA9B37BC CRC64;
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                                                     PEPTIDE
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SEQUENCE OF 20-153 FROM N.A.
MEDLINE-89096955; PubMed=3211153;
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                                                                                                                                                                                                                                               Conservative
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                                 102
106
109
153 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IGFI OR IGFIA.
Canis familiaris (Dog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
NCBI_TaxID=9615;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
-!- SUBCELLULAR LOCATION: Secreted.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INSULIN-LIKE GROWTH FACTOR I.
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Pred. No. 2.1e-42;
1; Mismatches 5;
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SMART; SM00078; I1GF; 1.
PROSTIE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Signal.
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C.
A.
D.
E PEPTIDE.
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EMBL; X52388; CAA36617.1; -.
EMBL; X52077; CAA36296.1; -.
EMBL; M31175; AAA31043.1; ALT_INIT.
EMBL; X17638; CAA35632.1; -.
PIR; S12825; S12825.
HSSP; P05019; 1GF1.
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                                                                                                                                                                                                                                                                                                                                                      MEDLINE-88268820; PubMed-3390164;
Francis G.L., Upton F.M., Ballard F.J., McNeil K.A., Wallace J.C.;
"Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences
and biological activities compared with those of a potent truncated
                                                                                                         Schmidt A., Einspanier R., Amselgruber W., Sinowatz F., Schams D.; Expression of insulin-like growth factor 1 (IGF-1) in the bovine oviduct during the oestrous cycle.":

Exp. Clin. Endoorinol. 102:364-369(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-86085881; PubMed-3941093;
Honegger A., Humbel R.E.;
"Insulin-like growth factors I and II in fetal and adult bovine serum. Purification, primary structures, and immunological cross-reactivities.";
J. Biol. Chem. 261:569-575(1986).
"Nucleotide sequence of the bovine insulin-like growth factor (IGF-1) and its IGF-1A precursor."; Nucleic Acids Res. 18:676-676(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 463; DB 1; Length 154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -1- SUBCELLULAR LOCATION: Secreted.
-1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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64201B6AF3140999 CRC64;
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0; Mismatches
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EMBL; S76122; AAD14209.1; --
PIR; A25622; IGBO1.
PIR; S00465; S00465.
PIR; S12672; S12672.
HSSP; P05019; IGF1.
InterPro; IPR000739; Insulin_IGF_relaxin.
PFIAN; PRO0276; INSULINA.
PRINTS; PR00277; INSULINA.
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                                                                        SEQUENCE OF 50-119 FROM N.A. MEDLINE=95172127; Pubmed=7867698;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PS00262; INSULIN; 1.
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Biochem. J. 251:95-103(1988).
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Matches 85; Conservative
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SEQUENCE OF 50-119.
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                                                                                                       PLASMA,
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Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.
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                             MEDLINE-93366192; PubMed-8359700;
Delafontaine P., Lou H., Harrison D.G., Bernstein K.E.;
Sequence of a CDNA encoding dog insulin-like growth factor I.";
Gene 130:305-306(1993).
-I- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-APR-1988 (Rel. 07, Created)
01-NOV-1991 (Rel. 20, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 122;
                                                                                                                                            MUCH ALGARAN
-1- SUBCELLULAR LOCATION: Secreted.
-1- SIMILARITY: BELONGS TO THE INSULIN/IGE/RELAXIN FAMILY.
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INSULIN-LIKE GROWTH FACTOR
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PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Signal.
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                                                                                                                                          MUCH HIGHER GROWTH-PROMOTING ACTIVITY
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Pfam; PF00049; Insulin, 1.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
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MEDLINE-90175014; PubMed-2308858;
Fotsis T., Murphy C., Gannon F.;
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HSSP; P05019; 1GF1.
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                  SEQUENCE FROM N.A.
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P07455;
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50 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mikawa S., Yoshikawa G.-I., Yamano Y., Sakai H., Komano T., Hosoi Y.,
Utsumi K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
-1- SUBCELLULAR LOCATION: SECRETED.
-1- TISSUE SPECIFICITY: EXPRESED IN ALL TISSUES EXAMINED: BRAIN,
LUNG_LIVER, SPLEEN, UTERUS, OVARY, TESTIS, HEART AND SKELETAL
                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         growth factor-I (IGF-I) mRNAS.";
Biosci. Biotechnol. Biochem. 59:759-761(1995).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASM
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Tissue- and development-specific expression of goat insulin-like
                                                                                                                                                                                                                                              16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
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                                                                                                                                                                                       154 AA.
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Pfam; PF00049; Insulin; 1.
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ProDom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IlGF; 1.
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EMBL; D26117; BAA05113.1; -.
                                          86
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                                        61 CAPLKPAKSARSVRAQRHTDMPKTOK
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EMBL, D26119; BAA05115.1; --
EMBL, D11378; BAA01976.1; --
HSSP; P05019; IGF1.
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                                                                                                                                                                                                                                                                                                                                                                                    Bovidae; Caprinae; Capra.
NCBI_TaxID=9925;
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                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                          IGF1.
Capra hircus (Goat).
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16-OCT-2001
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P51457;
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SEQUENCE
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MEDILINE-89323215; PubMed-2752053;
MEDILINE-89323215; PubMed-2752053;
MEDILINE-89323215; PubMed-2752053;
"Simultaneous isolation of insulin-like growth factors I and II from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=93221682; PubMed=8466647; Ohlsen S.M., Dean D.M., Wong E.A.; Characterization of multiple transcription initiation sites of the voine insulin-like growth factor-I gene and expression profiles of three alternatively spliced transcripts."; DNA Cell Biol. 12:243-251(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wong E.A., Ohlsen S.M., Godfredson J.A., Dean D.M., Wheaton J.E., "Cloning of ovine insulin-like growth factor-I cDNAs: heterogeneity in the mRNA population.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ovis aries (Sheep).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
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MEDLINE=93250051; PubMed=8485157;
Demmer J., Hill D.F., Petersen G.B.;
"Characterization of two sheep insulin-like growth factor II cDNAs with different 5'-untranslated regions.";
Bjochim. Biophys. Acta 1173:79-80(1993).
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                                                                                                                                                                     GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-91197361; PubMed-2015053; Dickson M.C., Saunders J.C., Gilmour R.S.; "The ovine insulin-like growth factor-I gene: characterization, expression and identification of a putative promoter."; J. Mol. Endocrinol. 6:17-31(1991).
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01-FEB-1991 (Rel. 17, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
                                                   Length 154;
Score 459; DB 1; Len
No. 7.9e-42;
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                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                  110 CAPLKPTKSARSVRAQRHTDMPKAQK 135
                                                                                                                                                                                                                                                                                    86
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MEDLINE=90126234; PubMed=2575490;
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                                                                                                                                                                                                                                                                                    61 CAPLKPAKSARSVRAQRHTDMPKTQK
                                                76.8%;
llarity 97.7%;
Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA 8:649-657(1989).
                                                                        Best Local Similarity
Matches 84; Conserv
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50 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109
                                                                                                                                             RESULT 12
IGFA_RAT
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                                                                                                                                                                                                                                                                                    modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
adult sheep serum.";
Biochim. 
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PRINTS; PRO0277; INSULINB.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
PROSTR; SMO078; IIGF; 1.
PROSTR; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Signal; Alternative splicing.
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D.
E PEPTIDE.
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Pred. No. 2.1e-41;
0; Mismatches 2; Indels
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E226CE6AF653CF3F CRC64;
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MISSING (IN ISOFORM A).
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Pfam; PF00049; Insulin; 1.
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CAA49232.1; JOINED.
AAA31544.1;
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17012 MW;
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97.7%;
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AAA31547.1;
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PIR; B33390; B33390.
PIR; S07198; S07198.
PIR; S07965; S07965.
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SEQUENCE OF 46-153 FROM N.A.
MEDLINE-87246437; PubMed=3595538;
Murphy L.J., Bell G.I., Duckworth M.L., Friesen H.G.;
"Identification, characterization, and regulation of a rat
complementary deoxyribonucleic acid which encodes insulin-like growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hoyt B.C., Lund P.K.;
"Isolation of rat testis cDNAs encoding an insulin-like growth factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chórdata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus
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Tamura K., Kobayashi M., Ishii Y., Tamura T., Hashimoto K.,
Nakamura S., Niwa M., Zapf J.;
"Primary structure of rat insulin-like growth factor-I and its
biological activities."
J. Biol. Chem. 264:5616-5621(1989).
-!- FUNCTION: THE INSULIN-INFE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                **Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Leroith D.; Structure of the rat insulin-like growth factor II transcriptional unit: heterogeneous transcripts are generated from two promoters by use of multiple polyadenylation sites and differential ribonucleic acid splicing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Shimatsu A., Rotwein P.; "Mosaic evolution of the insulin-like growth factors. Organization, sequence, and expression of the rat insulin-like growth factor I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE-Testis;
MEDLINE-88003970; PubMed=3652906;
Casella S.J., Smith E.P., van Wyk J.J., Joseph D.R., Hynes M.A.,
                                                                                                                                                                                                                                                                                                                                                                                             Insulin-like growth factor IA precursor (IGF'IA) (Somatomedin). IGF1 OR IGF-1.
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MEDLINE-91103966; Pubmed=1368571;
Kato H., Okoshi A., Miura Y., Noguchi T.;
"A new cDNA clone relating to larger molecular species of rat insulin-like growth factor-I mRNA.";
Agric. Biol. Chem. 54:1599-1601(1990).
                                                                                                                                                                                                                                                                                                                                                                            annotation update)
                                                                                                                                                                                                                                     153 AA.
                                                                                                                                                                                                                                                                                                                                      Last sequence update)
                                         Mol. Endocrinol. 2:1115-1126(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Biol. Chem. 262:7894-7900(1987).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
MEDLINE-89127259; Pubmed=3221878;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. MEDLINE=87222423; Pubmed=3034909;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Endocrinology 121:684-691(1987).
61 CAPLKPAKSARSVRAQRHTDMPKTQK
                                                                                                                                                                                                                                                                                                01-AUG-1988 (Rel. 08, Created)
01-FEB-1991 (Rel. 17, Last seq
30-MAY-2000 (Rel. 39, Last anno
                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6:325-330(1987).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=10116;
                                                                                                                                                                                                                                     IGFA_RAT
P08025;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 factor-I.
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0; Gaps

1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60

0; Mismatches

Conservative

84;

Matches

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A25540; A25540.
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                               SEQUENCE FROM N.A.
 NCBI_TaxID=10090;
                                                                                                                                                                                                                     SPLICING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (Fragment).
IGF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IGF1_COTJA
P51462;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IGF1_COTJA

ID IGF1_CC

AC P51462,

DT 01-0CT

DT 16-0CT

DE Insulit

DE (Fragme

GN IGF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIGNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
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                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bloinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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-!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; ISOFORM IGF-IA (SHOWN HERE) AND ISOFORM IGF-IB (AC P08024); ARE PRODUCED BY ALTERNATIVE SPLICING. -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      49 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Growth factor; Plasma; Alternative splicing; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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13-AUG-1987 (Rel. 05, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 450; DB 1; Length 153; Pred. No. 7.1e-41; 1; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INSULIN-LIKE GROWTH FACTOR IA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY.

L -> VRC (IN REF. 4).

966F3C0FA4EB3DE7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIMILARITY.
SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                      PRINTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
SWART; SM00078; I1GF; 1.
                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR000739; Insulin_IGF_relaxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             109 CAPLKPTKSARSIRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                            EMBL; M17335; AAA41386.1; ALT_INIT.
EMBL; M15481; AAA41387.1; ALT_INIT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                  EMBL; M15648; AAA41215.1; JOINED.
EMBL; M15649; AAA41215.1; JOINED.
EMBL; M17714; AAA41227.1; -.
                                                                                                                                                                                                     AAA41215.1; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17079 MW;
                                                                                                                                                                     EMBL; X06043; CAA29436.1; -. EMBL; M15651; AAA41215.1: -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              75.3%;
95.3%;
                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PR00276; INSULINA PRINTS; PR00277; INSULINB.
                                                                                                                                                                                                                                                                                                                                                                                         PF00049; Insulin; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            82; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                        PIR; A27849; A27849.
PIR; JH0133; JH0133.
PIR; B27804; B27804.
                                                                                                                                                                                                                                                                                                                                 PIR; A32857; A32857.
PIR; A28504; A28504.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   153 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                               HSSP; P05019; 1GF1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nsulin family;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IGF1 OR IGF-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IGFA_MOUSE
P05017;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISULFID
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DOMAIN
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DOMAIN
                                                                                                                                                                                                     EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHAIN
                                                                                                                                                                                                                                                                                                                                                                                           Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IGFA_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
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                                                                                                                                                                                                                                                                                                                                                                                            between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on it use by non-profit institutions as long as its content is in no wa modified and this statement is not removed. Usage by and for commercia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM0078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSS$RRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                PLASMA,
HAVE A
                      Bell G.I., Stemplen M.M., Fong N.M., Rall L.B.; "Sequences of liver cDNAs encoding two different mouse insulin-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23 GPETLCGAELVDALQEVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                  ALTERNATIVE PRODUCTS: 2 ISOFORMS; ISOFORM IGF-IA (SHOWN HERE) AND ISOFORM IGF-IB (AC P05018); ARE PRODUCED BY ALTERNATIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .;
                                                                        growth factor I precursors.";
Nucled Adds Res. 14:7873-788(1)86).
-I- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-0CT-1996 (Rel. 34, Last sequence update)
16-0CT-2001 (Rel. 40, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INSULIN-LIKE GROWTH FACTOR IA
                                                                                                                                                                                                                                                                                                                         -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIMILARITY.
SIMILARITY.
SIMILARITY.
SIMILARITY.
1054B8CAC72DC2D7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            74.7%; Score 447; DB 1; L 94.2%; Pred. No. 1.2e-40; Live 2; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      124 AA
                                                                                                                                                                                        MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HSSP; POSO19; 1GF1.
MGD; MG1:56432; 1gf1.
InterPro; 1PR00739; Insulin_IGF_relaxin.
Pfam: PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                              -!- SUBCELLULAR LOCATION: Secreted
MEDLINE-87040760; PubMed-3774549;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-OCT-1996 (Rel. 34, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 74 B
14120 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; X04480; CAA28168.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity 94.2 es 81; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               92
63
63
127
70
83
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Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
    à
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
;
                                                                                                                                                                                                       the oviduct of
Coturnix coturnix japonica (Japanese quail).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                       Kida S., Iwaki M., Nakamura A., Miura Y., Takenaka A., Takahashi S., Noguchi T.;
"Insulin-like growth factor-I messenger RNA content in the oviduct of Japanese quail (Coturnix coturnix japonica): changes during growth and development or after estrogen administration.";
Comp. Biochem. Physiol. 109C:191-204(1994).
-i- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA, ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20 GPETLCGAELVDALQFVCGDRGFYFSKPTGYGSSSRRLHHKGIVDECCFQSCDLRRLEMY 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-NOV-1990 (Rel. 16, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POTENTIAL.
INSULIN-LIKE GROWTH FACTOR I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B.

C.
A.
D.
B. E. PEPTIDE.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
C. 52254BBBA52C3B6 CRC64;
422; DB 1; Length
5.2e-38;
C. 526-38;
C. 526
                                                                                                                                                                                                                                                                                                                                                             SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 422; DB 1; Length 12-
Pred, No. 5.2e-38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             153 AA.
                                                                                                                                                                                                                                                                                                                     MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ProDom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IlGF; 1.
PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; S75247; -; NOT_ANNOTATED_CDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                          SUBCELLULAR LOCATION: Secreted
                                                                                                                    SEQUENCE FROM N.A.
MEDLINE=95187621; PubMed=7881819;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              77; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gallus gallus (Chicken)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19
89
89
48
60
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89
67
67
67
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               124 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
                                                                            NCBI_TaxID=93934;
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PROPEP
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  49 GPETLCGAELVDALQEVCGDRGFYFSKPTGYGSSSRRLHHKGIVDECCFQSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PLASMA,
HAVE A
                                                                                                                                                                           [2]
SEQUENCE OF 1-21 FROM N.A.
MEDILNE=91236750; PubMed=2033062;
Rotwein P., Kajimoto Y.;
"Structure of the chicken insulin-like growth factor I gene reveals
                                                                                                            "Structure and expression of a chicken insulin-like growth factor I
                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-91106695; PubMed-2272467;
Ballard F.J., Johnson R.J., Owens P.C., Francis G.L., Upton F.M.,
McMurtry J.P., Wallace J.C.;
"Chicken insulin-like growth factor-I: amino acid sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 radioimmunoassay, and plasma levels between strains and during
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gen. Comp. Endocrinol. 79:459-468(1990).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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ches 6;
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3; Mismatches
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EMBL; M74176; AAA48829.1; -.
PIR; A41399; A41399.
HSSP; P05019; 1GF1.
InterPro; IPR000739; Insulin_IGF_relaxin.
PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ProDom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
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                                                                                                                                                      Mol. Endocrinol. 3:1907-1913(1989).
                                                                                                                                                                                                                                                                                      conserved promoter elements.";
J. Biol. Chem. 266:9724-9731(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUBCELLULAR LOCATION: Secreted
                                                                   MEDLINE=90190648; PubMed=2628728;
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89.5%;
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109
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PRINTS; PR00277; INSULINB.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        77
                                                                                          Kajimoto Y., Rotwein
                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 49-118.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      153 AA;
                                            SEQUENCE FROM N.A.
NCBI_TaxID=9031;
                                                                                                                                      precursor
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Оp ò

Search completed: October 25, 2002, 15:57:34 Job time: 6.62651 secs

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GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
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OM protein - protein search, using sw model

October 25, 2002, 15:53:12; Search time 20.5422 Seconds (without alignments) 926.360 Million cell updates/sec Run on:

Title: Perfect score:

US-09-852-261-2 598 1 GPETLCGAELVDALQFVCGD......SINKNIKSQRRKGSTFEEHK 110 Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

562222 seqs, 172994929 residues ched:

562222 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

SPTREMBL_19:* Database :

sp_organelle:*
sp_phage:*
sp_phage:*
sp_ptant:*
sp_rodent:*
sp_virus:*
sp_virus:*
sp_vertebrate:*
sp_uclass[fled:* sp_invertebrate:*
sp_mammal:*
sp_mhc:* 1: sp_archea:*
2: sp_bacteria:*
3: sp_fungi:*
4: sp_human:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

sp_rvirus:* sp_bacteriap:*

sp_archeap:

SUMMARIES

	Description	Q13429 homo sapien	Q9np10 homo sapien	. Q14620 homo sapien	Q9n1c1 bos taurus	P79167 equus cabal	P97899 rattus sp.	093380 meleagris g	Q91230 oncorhynchu	Q91475 salmo salar	Q91162 oncorhynchu	Q91965 oncorhynchu	P81268 oncorhynchu	Q9ibi0 cyprinus ca	Q91161 oncorhynchu	Q91231 oncorhynchu	Q91476 salmo salar
	ID	,013429	Q9NP10	014620	Q9N1C1	P79167	P97899	093380	091230	091475	091162	091965	P81268	Q9IBI0	091161	091231	091476
	DB	4	4	4	9	9	11	13	13	13	13	13	13	13	13	13	13
	Query Match Length DB	139	130	137	133	139	127	153	191	145	155	188	188	178	116	149	117
dР	Query Match	98.7	78.3	78.3	77.4	76.6	75.3	9.07	67.5	67.1	67.1	67.1	67.1	66.8	66.7	66.7	65.6
	Score	230	468	468	463	458	450	422	403.5	401	401	401	401	399.5	399	399	392
	Result No.	-	2	m	4	2	9	7	8	6	10	11	12	13	14	15	16

090vv9 brachydanio	-			Q9yi82 carassius a				P79824 oreochromis		042289 oreochromis	Q9psx5 paralichthy	Q9yi57 acanthopagr	Q9n1s6 capreolus c	042336 myoxocephal	O02807 bubalus bub	O		Q9iaa0 carassius a	073721 tilapia sp.		-		Q90ww4 xenopus lae			0 bra		Q9myz6 trichosurus
600060 EL 1	13	13	13	13	13	16 13 093527 ·	159 13 093607	13	12 13 073720	13	13	13	9	13	9	37 6 Q28236	13	13	13	13	13	13	217 13 Q90WW4	13	54 11 Q63265	197 13 Q9PUD0	19 6 Q9MYX4	106 6 Q9MYZ6
0.5 65.3 16	382.5 64.0 11	63.7	63.5	63.2	63.0	377 63.0 18	63.0	٥.	6 62.9	6 62.9	61.9	_	59.4	58.7	55.8	50.5	49.9	46.5	44.1		42.9	42.7	41.9	41.6	_	38.9	30 38.5	27 38.0
17 39(18 382	19					24 376	25	36																			45

ALIGNMENTS

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MEDILINE-95237119; PubMed-7720641;

A Chew S.L., Lavender P., Clark A.J., Ross R.J.;

Chew S.L., Lavender P., Clark A.J., Ross R.J.;

The alternatively spliced human insulin-like growth factor-I

Transcript with hepatic tissue expression that diverts away from the

mitogenic IBE1 peptide.";

In mitogenic 
                                                                                                                                                                                                                                                                                                                        Homo sapiens (Human).
Waterrycha: Metazoa; Chordata; Craniata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 98.7%; Score 590; DB 4; Length 13 Best Local Similarity 99.1%; Pred. No. 1.9e-63; Matches 109; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             139 AA; 15611 MW; A62271872CA29DE4 CRC64;
                                                                                                                                     01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR-I (FRAGMENT).
                                                                  139 AA
                                                                  PRT;
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                                                                      PRELIMINARY;
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SEQUENCE FROM N.A.
TISSUE=LIVER;
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SEQUENCE
                                                                  013429
Q13429;
RESULT 1
Q13429
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Gaps

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MEDLINE=91187000; PubMed=2082190;
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SEQUENCE
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Q9N1C1;
                                                                                                                                                                           Signal.
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SEQUENCE FROM N.A.

MEDLINE-88065102; PubMed=3683205;

Rall L.B., Scott J., Bell G.I.;

"Human insulin-1ke growth factor I and II messenger RNA: isolation of complementary DNA and analysis of expression.";

"OTHER OF THE SECRETED (BY SIMILARITY).

"Ath. Enzymol. 146:239-248(1987).
         9
                              89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26 GPETLCGAELVDALQEVCGDRGFYFNRPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                  10 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
      GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (Human).
Bukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                 61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKGSTFEEHK 110
                                                              90 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRKGSTFEERK 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          78.3%; Score 468; DB 4; Length.130; 100.0%; Pred. No. 9.3e-49; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                        -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY EMBL; M2944; MA55543.1; --
HSSP; PO1343; AGF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL.
970FBAAECFA0352D CRC64;
                                                                                                                                                              Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          137 AA
                                                                                                                                                                                                                                                                                                                                                                   Interpro; IPR000739; Insulin_IGF_relaxin.
PRINTS; PR00276; INSULINA.
PRON0277; INSULINA.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL.
                                                                                                                                                    Created)
                                                                                                                              PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 CAPLKPAKSARSVRAQRHTDMPKTQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE 130 AA; 14406 MW;
                                                                                                                                               01-0CT-2000 (TrEMBLrel. 15, 01-0CT-2000 (TrEMBLrel. 15, 01-DEC-2001 (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                86; Conservative
                                                                                                                             PRELIMINARY;
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                                                                                                                                                                                  IGF1 PROTEIN PRECURSOR
                                                                                                                                                                                                       Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
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                                                                                                                                        09NP10;
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                                                                                                                            Q9NP10
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Q14620
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Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lien S., Karlsen A., Klemetsdal G., Vage D.I., Olsaker I., Klungland H., Aasland M., Heringstad B., Ruane J., Gomez-Raya L.; "A primary screen of the bovine genome for quantitative trait loci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bos taurus (Bovine).
Bukaryota; Metazooa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae, Bos
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                                                                                                                                                                                                                                                                                                                                                                                                                         137 INSULIN-LIKE GROWTH FACTOR I.
15177 MW; BFCC0D11E32AB75D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             affecting twinning rate.";
Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
EMBL; AF210387; AAF72409.1; -' OINED.
EMBL; AF210388; AAF72409.1; JOINED.
EMBL; AF210389; AAF72409.1; JOINED.
HSSP; P01343; IGF1.
InterPro; IPR000739; Insulin_IGF_relaxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    77.4%; Score 463; DB 6; Length 13
98.8%; Pred. No. 3.8e-48;
Live 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        133 AA; 14674 MW; A6991DBCB75C103B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-0CT-2000 (TrEMBLrel. 15, Created)
01-0CT-2000 (TrEMBLrel. 15, Last Sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           78.3%; Score 468; DB 4; I
100.0%; Pred. No. 9.9e-49;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     133 AA.
                                                                                                                                                                                              InterPro; IPR000739; Insulin_IGF_relaxin.
Paran; PR00049; Insulin, 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
PRODOM; PR001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ProDom; PD001048; Insulin_IGF_relaxin; 1. SMART; SM00078; IIGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                       POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    93 CAPLKPAKSARSVRAQRHTDMPKTQK 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity 100.
Les 86; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                  32
137
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Best Local Similarity
Matches 85; Conserv
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RESULT 5

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49 GPETLCGAELVDALQEVCGDRGFYENKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                            Rattus sp.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Meleagris gallopavo (Common turkey).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3; Indels
                                                                                                                                                                                                                                                                                                                                                                                        Shimatsu A., Rotwein P.; "Mosaic evolution of the insulin-like growth factors."; J. Biol. Chem. 262:7894-7900(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE 127 AA; 14106 MW; 104E126BCFCA5CB7 CRC64;
                                                                                                                                                                                                                        01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I.
                                                                                109 CAPLKPAKSARSVR-----YQPPSTNKKTKLQRRR 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1998 (TrEWBLrel. 08, Created)
01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR-I PRECURSOR.
                                                             61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRRK 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 450; DB 11;
Pred. No. 1.3e-46;
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                                                                                                                                                                             127 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProDom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IlGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro: IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POTENTIAL
                                                                                                                                                                                                              Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                             PARTIAL SEQUENCE FROM N.A.
MEDLINE=87222423; Pubmed=3034909;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                75.3%;
ilarity 95.3%;
Conservative
                                                                                                                                                                                                            01-MAY-1997 (TrEMBLrel. 03, 01-MAY-1997 (TrEMBLrel. 03, 01-DEC-2001 (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   82;
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P97899;
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                                                                                                                                                                                                                                                                                                                                                                                                                                        Otte K., Rozell B., Gessbo A., Engstrom W.; "Cloning and sequencing of an equine insulin-like growth factor I cDNA and its expression in fetal and adult tissues."; Gen. Comp. Endocrinol. 102:11-15(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SPLICING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                              88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PLASMA,
HAVE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ALTERNATIVE PRODUCTS: TWO ISOFORMS; ISOFORM IGF-IA (P51458) AND ISOFORM IGF-IB (SHOWN HERE); ARE PRODUCED BY ALTERNATIVE SPLICIN (BY SIMILARITY).
GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
               29 GPETLCGAELVDALQFVCGDRGFYFNRPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                           Equus caballus (Horse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
                                                                                                                                                                                                          01-MAY-1997 (TrEMBLrel. 03, Created)
01-037-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLRel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR IB PRECURSOR (IGF-IB) (SOMATOMEDIN C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           76.6%; Score 45%; DB 6; Length 139; 85.3%; Pred. No. 1.6e-47; Live 1; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BY SIMILARITY.
INSULIN-LIKE GROWTH FACTOR IB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; U26070; AAA68952.1; -.
EMBL; U85271; AAB47484.1; -.
HSSP; P01343; 1GF1.
InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
                                                                                                                                                                             139 AA.
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-!- SUBCELLULAR LOCATION: SECRETED.
-!- ALTERNATIVE PRODUCTS: TWO ISOFORMS; IS
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D.
E PEPTIDE.
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PROSITE; PS00262; INSULIN; UNKNOWN_1.
Insulin family; Growth factor; Signal.
                                                                               PRT;
                                                             CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE=LIVER;
MEDLINE=97013467; PubMed=8860303;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BY
BY
BY
                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 1-122 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best_Local Similarity 85.3
Matches 87; Conservative
                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=9796;
                                                                                                                                                                                                                                                                              (FRAGMENTS).
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NON_TER
SEQUENCE
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DISULFID
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Gaps

3;

DB 13; Length 161;

67.5%; Score 403.5; DB 13; Lenyu... 72.0%; Pred. No. 7.2e-41; ...matches 15; Indels

Conservative

161 AA; 17763 MW; A5A85D121377BF67 CRC64;

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1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
              PROSITE; PS00262; INSULIN; 1.
     SMART; SM00078; IlGF; 1.
                                                       Best Local Similarity
Matches 77; Conserv
                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NON_TER
SEQUENCE
                                             Query Match
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SIGNAL
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                                                                                                                                                                                                                                                                                               Archosauria; Aves; Neognathae; Galliformes; Meleagrididae; Meleagris.
NCBI_TaxID=9103;
                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                      1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus. NCBI_TaxID=74940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN=BIG QUALICUM RIVER, B.C.; TISSUE=LIVER;
MEDLINE=9347592; PubMed=7683374;
Mallis A.E., Devlin R.H.;
"Duplicate insulin-like growth factor-I genes in salmon display alternative splicing pathways.";
Mol. Endocrinol. 7:409-422(1993).
                                                                                                                                                                                                                                                                     .;
0
                                                                                                                                                                                                                                                 Length 153;
                          INSULIN-LIKE GROWTH FACTOR-I. 5AF1E5B8D13C70B5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (OCT-1994) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                         Pred. No. 4e-43;
3; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oncorhynchus tschawytscha (Chinook salmon) (King salmon)
                                                                                                                                                                                                                                                                                                                                                                                                                    01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                                                                                DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN-BIG QUALICUM RIVER, B.C.; TISSUE-LIVER;
Devlin R.H.;
                                                                                                                                                                                                                                                                                                                                                                                                   161 AA
                                                                                                                                          PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
SMART; SM00078; Insulin_IGF_relaxin; 1.
SMART; SM00078; ILGF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                       InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nterPro; IPR000739; Insulin_IGF_relaxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PD001048; Insulin_IGF_relaxin; 1.
                                                                                                                                                                                                                                               Score 422;
                                                                                                                                                                                                         POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                         109 CAPIKPPKSARSVRAQRHTDMPKAQK 134
                                                                                                                                                                                                                                                                                                                             61 CAPLKPAKSARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                       48 PO
118 IN
17295 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   INSULIN-LIKE GROWTH FACTOR-I.
                                                                                                                                                                                                                                               70.6%;
89.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00049; Insulin; 1
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
                                                                                                                                                                                                                                        Ouery Match
Best Local Similarity 89.59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; U15961; AAA67267.1;
HSSP; P01343; 1GF1.
                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                       SIGNAL 1
CHAIN 49
SEQUENCE 153 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProDom;
                                                                                                                                                                                              Signal.
                                                                                                                                                                                                                                                                                                                                                                                                             091230;
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Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 01, Last annotation update)
101-DEC-2001 (TrEMBLrel. 10). Last annotation update)
1NSULIN-LIKE GROWTH FACTOR I PRECURSOR (FRAGMENT).
Salmo salar (Atlantic salmon).
Eukaryota; Metacoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Taleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POTENTIAL.
INSULIN-LIKE GROWTH FACTOR I.
                                                                    61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNT--KSQRRKGST 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <1 18 POTENTIAL.
19 >88 INSULIN-LIKE GROWTH FACTOF
145 145
145 AA; 15885 MW; 3D94EDF477268FC4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRR 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             67.1%; Score 401; DB 13; 72.3%; Pred. No. 1.3e-40; iive 11; Mismatches 17;
                                                                                                                                                                                 145 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR000739; Insulin_IGF_relaxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           155
                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SMART; SM00078; IlGF; 1. PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity 72.3%
hes 73; Conservative
                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=8030;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q91162
Q91162;
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1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=94296559; PubMed=8024699;
Kavasan V.M., Grebenjuk V.A., Koval A.P., Skorokhod A.S.,
Roberts C.T. Jr., Leroith D.;
"Isolation of a second nonallelic insulin-like growth factor I gene from the salmon genome.";
DNA CALL Biol. 13:555-59(1994).
-i- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
NCBI_TaxID=8018;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-AUG-1998 (TrEMBLrel. 07, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I.1 PRECURSOR (IGF-I.1) (SOMATOMEDIN).
                                                Wallis A.E., Devlin R.H.; "Duplicate insulin-like growth factor-I genes in salmon display alternative splicing pathways."; Mol. Endocrinol. 7:409-422(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 188;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-!- SUBCELLULAR LOCATION: SECRETED.

-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
EMBL; AF063216; AAC18833.1; -.
HSSP; P01343; IGF1.
InterPro; IPR000739; Insulin_IGF_relaxin.
                                                                                                                                                                                                                                                                                                              Devlin R.H.;
Submitted (SEP-1994) to the EMBL/GenBank/DDBJ databases.
-1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
EMBL; U15960, AAA67266.1; -.
EMBL; U14556, AAA67263.1; -.
HSSP; P01343; IGF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17; Indels
                                                                                                                                                                                                                           Submitted (OCT-1994) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20782 MW; F4D705BA811024B8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           105 CAPVKSGKAARSVRAQRHTDMPRTPKVSTAVQNVDRGTERR 145
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67.1%; Score 401; DB 13; 72.3%; Pred. No. 1.7e-40;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRINTS; PRO0276; INSULINA.
PRINTS; PRO0277; INSULINB.
PRODOM; PRO01049; INSULINB.
SMART; SMO0078; ILGF, 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              nssr; Folssk; login in IGF_relaxin.
TrerPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
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                           MEDLINE=93247592; PubMed=7683374;
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    PRELIMINARY;

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 188 AA;
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                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                  TISSUE=LIVER;
                                                                                                                                                                                                                                                                                                TISSUE=LIVER;
                                                                                                                                                                                                       Devlin R.H.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P81268
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                                                                                                                                                                                                                                                                                       Cao Q.P, Duguay S.J, Plisetskaya E., Steiner D.F., Chan S.J.; "Nucleotide sequence and growth hormone regulated expression of salmon insulin-like growth factor I mRNA."; Mol. Endocrinol. 3:2005-2016(1989).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 78
                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-93024477; PubMed-1406698;
Duguay S.J, Park L.K., Samadpour M., Dickhoff W.W.;
"Nucleotide sequence and tissue distribution of three insulin-like
                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
NCBI_TaxID=74940;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POTENTIAL.
INSULIN-LIKE GROWTH FACTOR I.
R -> X (IN REF. 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              growth factor I prohormones in salmon.";
Mol. Endocrinol. 6:1202-1210(1992).
-!- SUBCELULAR LOCATION: SECRETED (BY SIMILARITY).
--- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
EMBL; M81913; AAA49413.1; --
HSSP; P01343; 1GF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    022FD3CA39CA3160 CRC64;
01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I PRECURSOR (FRAGMENT).
Oncorhynchus kisutch (Coho salmon).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR-I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRR 101
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR000739; Insulin_IGF_relaxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ProDom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IlGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                  MEDLINE-90190659; PubMed-2628735;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16968 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00049; Insulin; 1.
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PRINTS; PR00277; INSULINB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
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19 > 73
155
155 AA;
                                                                                                                                                                                                                       SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                              FISSUE-LIVER;
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CONFLICT NON_TER SEQUENCE

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RESULT 11

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NON_TER SIGNAL

CHAIN

Signal.

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Gaps

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62 GPETLCGAELVDTLQFVCGDRGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 121
                                       61 CAPLKPAKSARSVRAQRHTDMPKT-QKYQPPSTNKNTKSQRRKGST 105
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SEQUENCE
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SIGNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cyprinus carpio (Common carp).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi;
Cypriniformes; Cyprinidae; Cyprinus.
                                         Probon; PD01048; Insulin_IGF_relaxin; 1.
SMARTS, SM00078; ILGF; 1.
PROSITE; PS00262; ILGF; 1.
Insulin family; Growth factor; Plasma; Multigene family; Signal.
SIGNAL 1
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                                                                                                                                                                                                                                                                                                                                                                               Length 188;
                                                                                                                                                                        INSULIN-LIKE GROWTH FACTOR I.1
                                                                                                                                                                                                                                                                                                                                                                                                                   17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18; Indels
                                                                                                                                                                                                                                                                                    ( SIMILARITY.
( SIMILARITY.
( SIMILARITY.
F4CEB6D05E0F24B8 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          105 CAPVKSGKAARSVRAQRHTDMPRTPKISTAVQNVDRGTERR 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQRR 101
                                                                                                                                                                                                                                                                                                                                                                                 ; Score 401; DB 13;
; Pred. No. 1.7e-40;
11; Mismatches 17;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13; Mismatches
                                                                                                                                                      SIMILARITY
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Pfam: PF00049; Insulin; 1.
PRNUMS: PR00277; INSULINB.
PRODOM: PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INSULIN-LIKE GROWTH FACTOR I SUBTYPE EAZ
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                                                                                                                                                                                                                                                                                                                                                                                 67.18;
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 Pfam; PF00049; Insulin; 1
                   PRINTS; PR00276; INSULINA PRINTS; PR00277; INSULINB
                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
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Matches 73; Conserv
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                                                                                                                                                                                                                                                                                                                                            188 AA;
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MEDILINE-90190559; PubMed-2628735;

Cao O.P. Duguay S.J. Plisetskaya E., Steiner D.F., Chan S.J.;

"Nucleotide sequence and growth hormone regulated expression of salmon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2; Gaps
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                                                                                                                                                                                            01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 10), Last sequence update)
01-DEC-2001 (TrEMBLrel. 10), Last annotation update)
INSULIN-LIKE GROWTH FACTOR I PRECURSOR (FRAGMENT).
Oncorhynchus kisutch (Coho salmon).
Sukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
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122 CAPVKPGKTPRSVRAQRHTDSPRTAKKPLPGQSHSSYKEVHQKNSS 167
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19 >88 INSULIN-LIKE GROWTH FACTOI
116 116
116 AA; 12697 MW; CSF378915179D89D CRC64;
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091231;
01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
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                                                                                                                                                  116 AA
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PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         insulin-like growth factor I mRNA.";
Mol. Endocrinol. 3:2005-2010(1989).
                                                                                                                                                  PRT;
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HSSP; P01343; IGF1.
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Oncorhynchus tschawytscha (Chinook salmon) (King salmon).
Bukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
                                                                                                                                                                    SEQUENCE FROM N.A.
STRAIN-BIG QUALICUM RIVER, B.C.; TISSUE-LIVER;
MEDLINE-93247592; PubMed-7683374;
Wallis A.E., Devlin R.H.;
"Duplicate insulin-like growth factor-I genes in salmon display alternative splicing pathways.";
Mol. Endocrinol. 7:409-422(1993).
                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
STRAIN=BIG QUALICUM RIVER, B.C.; TISSUE=LIVER;
Devilin R.H.;
Submitted (OCT-1994) to the EMBL/GenBank/DDBJ databases.
-: SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-: SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
R EMBL; U15962; AAA67268.1; -.
R ISSP; PO1343; IGF1.
R INTEPRO; IPRO00739; Insulin_IGF_relaxin.
R Pfam: PF00049; Insulin_IGF_relaxin.
R PRINTS; PR00277; INSULINB.
R PRODICTO: INSULINB.
R PROSITE; SM00078; INSULIN: 1.
R SMART; SM00778; INSULIN: 1.
R PROSITE; PS00262; INSULIN: 1.
R PROSITE; PS00262; INSULIN: 1.
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66.7%; Score 399; DB 13; Length 1
Best Local Similarity 75.5%; Pred. No. 2.3e-40;
Matches 74; Conservative 10; Mismatches 12; Indels
01-DEC-2001 (TrEMBLrel. 19, Last annotation update) INSULIN-LIKE GROWTH FACTOR-I.
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Arch completed: October 25, 2002, 15:58:45 Job time: 22.5422 secs

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2; Gaps

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1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60

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October 25, 2002, 15:52:06; Search time 25.4096 Seconds (without allgaments) 485.217 Million cell updates/sec
GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                             OM protein - protein search, using sw model
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1 GPETLCGAELVDALQFVCGD.....TNKKMKSQRRRKGSTFEEHK 111 US-09-852-261-6 602 Title: , Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

747574 Total number of hits satisfying chosen parameters:

747574 seqs, 111073796 residues

:pəqɔ:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

1. /SIDSI/gcgdata/geneseqp/geneseqp-embl/AA1980.DAT:*
2. /SIDSI/gcgdata/geneseqp/geneseqp-embl/AA1981.DAT:*
3. /SIDSI/gcgdata/geneseqp/geneseqp-embl/AA1981.DAT:*
4. /SIDSI/gcgdata/geneseqp/geneseqp-embl/AA1981.DAT:*
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22. /SIDSI/gcgdata/geneseqy/geneseqp-embl/AA1999.DAT:*
22. /SIDSI/gcgdata/geneseqy/geneseqp-embl/AA1999.DAT:* A_Geneseq_032802:* :: Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Human IGF-I protei
AAW57882
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153
77.2
465
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Human insulin like Rabbit liver-type Human prepro-somat Goat Insulin like Chimeric rhIGF-I-A Rat liver-type IGF	Rat liver-type IGF Pep 17 used in nuc Peptide ligand Pep Nuclear ligand Pep	Rainbow trout insu Flatfish insulin-1 Recombinant botuli Sequence of human	0047	I. Homo sa de derived IGF-I pept nce of insu insulin-li in like gro	Wild type IGF-1 se Recombinant insuli Peptide derived fr Human mature insul Human insulin-like Human insulin-like Insulin like growt Amino acid sequenc Native human insul
AAW23302 AAE02456 AAP60578 AAR40844 AAW64068 AAE02451	AAE02531 AAY98482 AAY59027 AAU04272	AAR88089 AAR72472 AAW56011 AAP40034	40041	AAR41774 AAR43606 AAR48590 AAR55275 AAR75657 AAR86874	AAR87744 AAR89949 AAW33907 AAW12342 AAB12769 AAB12772 AAB09616 AAX84871
18 17 17 17 17 17 17	22 21 22 22 22 22 22 22 22 22 22 22 22 2	17 16 19 5	8 8 11 14	14 115 116 117	17 18 18 18 21 21 21 21
156 105 119 154 191	105 78 78 78	176 186 953 70	70 70 70 70	70 70 70 70	70 70 70 70 70
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ALIGNMENTS

Use of insulin like growth factor I characterised by presence of

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The present invention relates to use of mechano-growth factor (MGF),
an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
medicament for the treatment of neurological disorder. The MGF is capable
of reducing motoneurone loss by 20% or greater in response to nerve
avulsion, and effects motoneurone rescue, preferably adult motoneurone
contraction. The MGF polynucleotide and polypeptide are useful in the
contracture of a medicament for the treatment of a neurological disorder,
contracture of a medicament for the treatment of a neurological disorder,
contracture of a medicament for the treatment of a neurological disorder,
contracture of a medicament for the treatment of a neurological disorder,
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contracture of a medicament for the treatment of a neurological disorder,
contracture of motoneurones and/or neurodegenerative disorder,
contracture of motoneurone of juvenile muscular atrophy,
contracture of software and processive of the processive of the processive and consurances, motoneurone lesion or nerve damage, and
contracture of stabbilit IGF-I isoform MGF. MGF is a muscle
contracture of stabbilit IGF-I isoform MGF. MGF is a muscle
contracture of scalence of IGF-I exons 4, 5 and 6 in the reading frame
                    Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of medicament for the treatment of neurological disorder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rabbit insulin like growth factor 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW23301 standard; Protein; 121 AA
                                                                                                 Claim 4; Page 54; 66pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
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mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease.
                                                                                                             A use of insulin like growth factor I (IGF-1) has been developed, and is characterised by the presence of the Ec peptide, or a functional equivalent, in the treatment or therapy of a human or animal. The IGF-1 polypeptide can be used to treat muscular disorders, e.g. buchenne or Becker muscular dystrophy, autosomal dystrophies and related progressive skeletal muscle weakness and wasting, muscle atrophy in ageing humans, spinal cord injury induced muscle atrophy and neuromuscular diseases, and cardiac disorders, e.g. diseases where promotion of cardiac muscle protein synthesis is a beneficial treatment, cardiomyopathies and acute heart failure or insult, specifically myocarditis or myocardial infarction. It can also be used to promote bone fracture healing and maintenance of bone in old age. The present sequence represents rabbit IGF-1 used in the present specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                  peptide – to treat humans or animals, particularly muscle disorders,
heart conditions or neuromuscular diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 121;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRKGSTFEEHK 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; IGF-I isoform; Insulin-like Growth Factor-I; MGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human IGF-I isoform mechano-growth factor (MGF) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 100.0%; Score 602; DB 18; Best Local Similarity 100.0%; Pred. No. 1.1e-54; Matches 111; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ¥
                                                                 Disclosure, Fig 3; 33pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAE02447 standard; Protein; 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-NOV-2000; 2000WO-GB04354
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-AUG-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Johnson I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-355620/37.
                                                                                                                                                                                                                                                                                                                                                                                             121 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-PSDB; AAD06398.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Goldspink G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-NOV-1999;
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                                                                                                                                                                                                                                                                                                                                                                                               Seguence
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QQ
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                                                                                                                                                                                            including a disorder of motometrones and/or neurodegenerative disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, poliomyelitis or post-polio syndrome, a disorder caused by exposure to a toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with aging, peripheral neuropathies, Alzhelar dystrophy, diabetic neuropathy, peripheral neuropathies, Alzhelar dystrophy, diabetic neuropathy, peripheral neuropathies, Alzhelar isoform MGF is a muscle isoform having extracellular (EC) domain, hence also referred as IGF-I EC. The MGF protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4, 5 and 6 in the reading frame
                                                      The present invention relates to use of mechano-growth factor (MGF), an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motioneurone loss by 20% or greater in response to nerve avoilation, and effects motioneurone rescue, preferably adult motioneurone rescue. The MGF polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 22; Length 110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence of pre-pro-insultn-like growth factor 1B (ppIGF-1B).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEEHK 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRKKGSTFEEHK 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             recombinant DNA procedures for use as growth promoters for enhancing lactation, for stimulating cell proliferation etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New pre-pro-insulin-like growth factor-1 protein - obtd. by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cell proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               95.1%; Score 572.5; DB 2 96.4%; Pred. No. 1.1e-51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Growth promoter; lactation enhancer;
                Claim 4; Page 50-51; 66pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAP70277 standard; protein; 195 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 11; Fiq 6; 59pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87EP-0870001.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           86US-0816662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (UNIW ) UNIV OF WASHINGTON.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  al Similarity 96.4
107; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rotwein PS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1987-200203/29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         110 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                06-JAN-1987;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-NOV-1986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07-JAN-1986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-APR-1991
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAP70277;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
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Matches
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3555×8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
           A 42 base oligonucleotide corresponding to the DNA sequence encoding amino acids 10 to 23 of mature human IGF-I was synthesized (AAN70437). The radiolabeled 42 mer was then employed to screen for IGF-I containing DNA sequences in a human liver CDNA library. Insulin-like growth factors-IA and -IB CDNAs were isolated from a human IGF-I genomic gene was isolated and mapped. It encodes at least two preproinsulin-like growth factor-I proteins. An essentially pure proproinsulin-like growth factor-I protein comprishing the sequence of amino acids shown in Figure six is claimed (AAP70277).
                                                                                                                                                                                                                                                                                                                                              49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                           GPETLCGAELVDALOFVCGDRGFYFNKPTGYGSSSRRAPOTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention relates to use of mechano-growth factor (MGF),
                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                       Length 195;
                                                                                                                                                                                                                                                   Score 536; DB 8; Length 19
Pred. No. 1.2e-47;
2; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rat; IGF-I isoform; Insulin-like Growth Factor-I; MGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rat IGF-I isoform mechano-growth factor (MGF) protein.
                                                                                                                                                                                                                                                                                                                                                                                                 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRR 102
                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 4; Page 52; 66pp; English.
                                                                                                                                                                                                                                                                                     2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAE02448 standard; Protein; 111
                                                                                                                                                                                                                                                   89.0%;
96.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-NOV-2000; 2000WO-GB04354.
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                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goldspink G, Johnson I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001-355620/37.
                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                   Sequence 195 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; AAD06399
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                                                                                                                                                                                                                                                                                       98;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAE02448;
                                                                                                                                                                                                                                                     Query Match
Best Local 3
                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                 61
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manufacture of medicament for the treatment of a neurological disorder, including a disorder of metoneurones and/or neurodegenerative disorder, including a disorder of metoneurones and/or neurodegenerative disorder, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, progressive poliomyelitis or post-polio syndrome, a disorder caused by exposure to a toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone lesion or nerve damage, peripheral neuropathies, Alzheimer's disease and Parkinson's disease. Progressit sequence is rat IGF-I isoform MGF. MGF is a muscle isoform having extracellular (Ec) domain, hence also referred as IGF-I-Ec. The MGF protein compatises amino acid sequences encoded by an incleic acid sequence of IGF-I exons 4, 5 and 6 in the reading frame
The MGF polynucleotide and polypeptide are useful in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of MGF.
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111 AA; Sequence

ö Gaps ; 0 Length 111; Score 512; DB 22; Length 11 Pred. No. 2e-45; 3; Mismatches 12; Indels 85.0%; 86.5%; Query Match
Best Local Similarity 86.5

61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRKGSTFEEHK 111

qq ò

AAE02452 standard; Protein; 105 10-AUG-2001 (first entry) AAE02452; RESULT 6 AAE02452

AA.

Rabbit liver-type IGF-I isoform (L.IGF-I) protein.

mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; pollomyellitis; post-pollo syndrome; toxin; motomeurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease; liver; L.IGF-I. Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF;

Oryctolagus cuniculus.

WO200136483-A1.

25-MAY-2001.

15-NOV-2000; 2000WO-GB04354

(UNICO) UNIV COLLEGE LONDON 99GB-0026968 15-NOV-1999;

Johnson I; Goldspink G,

WPI; 2001-355620/37.

N-PSDB; AAD06405.

Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of medicament for the treatment of neurological disorder -

Disclosure; Page 60-61; 66pp; English.

The present invention relates to use of mechano-growth factor (MGF),

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an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motioneurone loss by 20% or greater in response to nerve avulsion, and effects motioneuron essene, preferably adult motioneurone rescue, preferably adult motioneurone rescue. The MGF polynuclectide and polypeptide are useful in the communicature of a medicament for the treatment of a neurological disorder, including a disorder of motioneurones and/or neurodegenerative disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, infantile or juvenile muscular atrophy, colimpelities or post-polio syndrome, a disorder caused by exposure to a coxin, motioneurone trauma, a motioneurone lesion or nerve damage, an injury that affects motioneurones, motioneurone loss associated with aging, autosomal or sex-linked muscular dystrophy, diabetic neuropathy, cautosomal or sex-linked muscular dystrophy, diabetic neuropathy, peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is rabbit liver-type IGF-I isoform (LIGF-I).

The IndF-I protein comprises amino acid sequences encoded by the contract of the present sequence of IGF-I exons 4 and 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                        Note: The present sequence (SEQ ID NO: 14) is stated as being the same as that shown in figure 10 (AAE02456) of the specification. However
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human liver-type IGF-I isoform (L.IGF-I) protein.
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Pred. No. 6.6e-41;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAE02450 standard; Protein; 105 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     77.7%; Scc.
100.0%; Pre
0; 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             it differs at few positions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
nes 86; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           105 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAE02450;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
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AAE02450
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mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy, muscular atrophy, pollomyelitis; post-pollo syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease; liver; L.IGF-I. Human; IGF-I isoform; Insulin-like Growth Factor-I; MGF; 15-NOV-2000; 2000WO-GB04354 99GB-0026968 (UNLO) UNIV COLLEGE LONDON. WPI; 2001-355620/37. N-PSDB; AAD06403. WO200136483-A1 Homo sapiens. Goldspink G, 15-NOV-1999; 25-MAY-2001

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The inversion features to modulate and memory consolidation in an animal comprises treating with an agent that modulates the activity of one or more of genes from zif268, insulin-like growth factor (IGF), curre inversion of genes from zif268, insulin-like growth factor (IGF), curre inversion of genes from zif268, insulin-like growth factor (IGF), curred to grow the computation of the method is useful for conducting a drug and/or target discovery business, which comprises conducting detail of reflicacy and toxicity in animals, and comprises conducting therapeutic profiling of the agents (or their analogues) identified, for efficacy and toxicity in animals, and comprises conducting a parameceutical preparation including one or more agents of a third party the rights for further drug development of the comprises an additional step of establishing a distribution of the current comprises an additional step of establishing a distribution of system for distributing the preparation for sale and may optionally include establishing a sales group for marketing the preparation. A pharmaceutical composition containing the agent is useful for cenhancing memory consolidation in an animal, or for augmenting learning and memory, or otherwise for enhancing the functional performance of central nervous system neurons, where the agent is a cAMP elevating agent (agents) cativates adenylate cyclase. The composition is useful for treating cativates associated with learning disabilities, memory impairment e.g. due to toxicant exposure brain injury, epilepsy, mental retardation in children and senile dementia, including Alzhelmer's disease. The
                                                                                                                                                          invention relates to modulating long term memory consolidation in
      an agent that modulates activity of one or more genes from zif268, insulin-like growth factor, glutamate receptor 2, c/EBPbeta and VGF \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 33 GPETLCGAELVDALQFVCGDRGFYFNRPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 465; DB 22;
Pred. No. 1.8e-40;
1; Mismatches 0;
                                                                                              Disclosure; Page 90-91; 100pp; English.
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49..118
/label= mature peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    49..77
/label= B domain
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/label= C domain
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                burn; wound; brain metastasis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            77.2%;
98.8%;
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/label= #
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Best Local Similarity
Matches 85; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    137 AA;
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an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
medicament for the treatment of neurological disorder. The MGF is capable
of reducing motoneurone loss by 20% or greater in response to nerve
avulsion, and effects motoneurone rescue, preferably adult motoneurone
crescue. The MGF polynucleotide and polypeptide are useful in the
cmanufacture of a medicament for the treatment of a neurological disorder,
including a disorder of motoneurones and/or neurodegenerative disorder,
including a disorder of motoneurones and/or neurodegenerative disorder,
cs. 9., amyotrophic lateral sclerosis, spinal muscular atrophy,
cs. poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
coliomyelitis or post-polio syndrome, a disorder caused by exposure to a
coliomyelitis or post-polio syndrome, a disorder caused by exposure to a
coliomyelitis or post-polio syndrome.
Coliomyelitis or p
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GPETICGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; long-term memory protein; LTM; insulin-like growth factor; neuroleptic; anticonvulsant; nootropic; neuroprotective; IGF1; ecebroprotective; drug discovery; therapeutic profiling; learning disability; memory impairment; brain injury; epilepsy; mental retardation; senile dementia; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             77.2%; Score 465; DB 22; Length 105; 98.8%; Pred. No. 1.3e-40; ive 1; Mismatches 0; Indels
medicament for the treatment of neurological disorder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human insulin-like growth factor, IGF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAU09067 standard; Protein; 137 AA
                                                            Disclosure; Fig 8; 66pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (UYBR-) UNIV BROWN RESEACH FOUND.
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Matches 85; Conservative
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N-PSDB; AAS14695.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       105 AA;
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AAU09067;

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RESULT 8 AAU09067

Sequence

8888

Query Match

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Gaps

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cancer;

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IGF-1; insulin-like growth factor I; skeletal alpha-actin gene promoter; muscle atrophy; diabetes; osteoporosis; growth disorder; therapy; AIDS; Chacot-marie-tooth disease; atherogenesis; haemophilia; neuropathy.
                                                                                                                                                                                                                                                                                                                                                     mammals. The method comprises delivering a nucleic acid vector for the expression of a growth factor or neurotrophic factor in a tissue or tissues. The present sequence represents human IGF-1 (insulin-like growth factor 1) which is used in the method of the invention. Due to the growth and stimulatory effects of growth factors and neurotrophic factors, introducing these factors to degenerated muscles in the urinary system can improve UI by enhancing both their integrity and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                      A method has been developed of treating urinary incontinence (UI) in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                             Treatment of urinary incontinence - by delivering nucleic acid vector for expression of growth factor or neurotrophic factor in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   77.2%; Score 465; DB 19; Length 153; 98.8%; Pred. No. 2e-40; ive 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                          Claim 12d; Page 108-109; 117pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Schwartz R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAPLKPAKAARSVRAQRHTDMPKTQK 86
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                     97US-0036862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97WO-US21852
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N-PSDB; AAV40793, AAV40794.
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                                                            (GENE-) GENEMEDICINE INC.
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Best Local Similarity 98.8
Matches 85; Conservative
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                                                                                                                                              WPI; 1998-437184/37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human IGF-I protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          neural innervation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              153 AA;
                                                                                                                                                                    N-PSDB; AAV50425
                     04-FEB-1997;
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                                                                                                       Coleman M;
                                                                                                                                                                                                                                                      tissue(s)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  The amino acid sequence of the insulin-like growth factor 1 pre-protein. Processing of the protein results in a 70 amino acid mature protein. The mature protein is split into 4 domains: the B domain has strong homology to the B chain of insulin, the A domain similarly has homology to the A chain of insulin. These domains are separated by a C domain and the mature protein is terminated by a D domain at the C-terminus. The D domain sequence was used to synthesis peptides (AARB3801-2) that chains are separated by a C domain and induces include amino acid residues 60-64 of the mature IGF-1 protein. IGF-1 binds to the IGF-1 receptor (IGF-1R) via the D domain and induces activation of the IGF-1R by autophosphorylation of the IGF-1R.

The synthetic peptides are useful as inhibitors of IGF-1 binding to IGF-1R and thus may be used in the treatment of disorders characterised by many contractions.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49 GPETLCGAELVDALQEVCGDRGFYENKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                 synthetic IGF-1 analogues comprising 5-25 amino acids - useful treatment of diseases associated with undesirable cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; IGF-1; insulin-like growth factor 1; urinary incontinence; gene therapy; neurotrophic factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 465; DB 16; Length 153;
Pred. No. 2e-40;
1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Page 20-21; 28pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAW69733 standard; Protein; 153 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
/label- D domain
                                                                                                                                                                                                        (UYJE-) UNIV JEFFERSON THOMAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 77.2%;
98.8%;
                                                                                                                      94WO-US14576
                                                                                                                                                               93US-0167653,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98WO-US02051.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   wounds or brain metastases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 98.8
Matches 85; Conservative
                                                                                                                                                                                                                                                 Baserga R, Jameson BA;
                                                                                                                                                                                                                                                                                          WPI; 1995-231515/30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            153 AA;
                                                                                                                                                                                                                                                                                                                                                                          proliferation
                                                                                                                      15-DEC-1994;
                                    WO9516703-A1
                                                                                                                                                               15-DEC-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-0CT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9833529-A1
                                                                             22-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human IGF-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAW69733;
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RESULT 10 AAW69733

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AAW23302 standard; Protein; 156
                                                                                                                                                                                                  97WO-GB00658.
                                                                                                                                                                                                        96GB-0005124.
                                                                                                    Local Similarity
hes 85; Conserv
                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                      W09733997-A1
                                                                                                                                                                                                  11-MAR-1997;
                                                                                                                                                                                                        11-MAR-1996;
                                                                                                                                                           14-APR-1998
                                                                                            Seguence
                                                                                                 Query Match
                                                                                                                                                    AAW23302;
                                                                                                       Matches
                                                                                                                         61
                                                                                                                                        ILT 12
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Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF; mechano-growth factor; neurological disorder; neurodegenerative disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder;
                                                                                                                                                                                                                                                                     A use of insulin like growth factor I (IGF-1) has been developed, and is characterised by the presence of the Ec peptide, or a functional equivalent, in the treatment or therapy of a human or animal. The IGF-1 polypeptide can be used to treat muscular disorders, e.g. Duchenne or Becker muscular dystrophy, autosomal dystrophies and related progressive skeleral muscle weakness and wasting, muscle atrophy in ageing humans, spinal cord injury induced muscle atrophy and neuromuscular diseases, and cardiac disorders, e.g. diseases where promotion of cardiac muscle protein synthesis is a beneficial treatment, cardiomyopathies and acute heart failure or insult, specifically myocardiats or myocardial infarction. It can also be used to promote bone fracture healing and maintenance of bone in old age. The present sequence represents human IGF-1 Ea isoform used in the present specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rabbit liver-type IGF-I isoform (L.IGF-I) protein, alternative version.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           52 GPETLCGAELVDALQEVCGDRGFYENKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                    Use of insulin like growth factor I characterised by presence of Ecpeptide - to treat humans or animals, particularly muscle disorders, heart conditions or neuromuscular diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            damage; autosomal muscular dystrophy; diabetic neuropathy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sex-linked muscular dystrophy; peripheral neuropathy;
Alzheimer's disease; Parkinson's disease; liver; L.IGF-I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 465; DB 18;
Pred. No. 2e-40;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'note= "Encoded by GAG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "Encoded by GAG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       112 CAPLKPAKSARSVRAORHTDMPKTOK 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAE02456 standard; Protein; 105 AA.
                                                                                                                                                                                                                    Disclosure; Fig 4; 33pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 CAPLKPAKAARSVRAQRHTDMPKTQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  77.2%;
98.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-AUG-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oryctolagus cuniculus
1997-470877/43.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sest Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    156 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Misc-difference 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Misc-difference 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200136483-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAE02456;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nerve
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                   This sequence is the human insulin-like growth factor I (IGF-I). The DNA can be used in the vector of the invention, for expression of a nucleic acid sequence in a cell, which comprises: (a) a nucleic acid cassequence in a cell, which comprises: (a) a nucleic acid cassette containing a sequence encoding IGF-I; (b) a 5' flanking region including one or more sequences necessary for expression of the nucleic acid cassette, including a promoter from a skeletal alpha-actin gene; (c) a linker connecting the 5' flanking region to a nucleic acid, the clinker having a position for inserting the nucleic acid cassette, and lacking the coding sequence of a gene with which it is naturally associated; and (d) a 3' flanking region, including a 3' untranslated region or a 3' non coding region on both, where the 3' flanking region is 3' to the position for inserting the nucleic acid cassette and comprises a sequence from a growth hormone 3' upr. The vector can provide for efficient IGF-I expression, particularly in gene therapy. It can be used for the delivery of IGF-I for treating diseases such as muscle atrophy. C diabetes, neuropathy, esteoporosis, and growth disorders. They can be used contracting peripheral neuropathies resulting from diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Type II or Type II diabetes, genetic disease such as Type II or Type II diabetes, genetic disease such as Type II or Type II diabetes, genetic disease such as Type II or Type II diabetes, genetic d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cardiovascular, cerebrovascular, or peripheral vascular disease, haemophila, inflammation and side-effects from anti-cancer and anti-viral drugs. The vectors can also be used to create transgenic animals for research or livestock improvement.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Insulin like growth factor 1; IGF-1; Ec peptide; muscle disorder;
heart; neuromuscular disease.
                          New vector for expression of insulin-like growth factor-I -containing a skeletal alpha-actin gene promoter, IGF-I coding sequences and a 3' region from growth hormone 3'-UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 19; Length 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                77.2%; Score 465; DB 19
98.8%; Pred. No. 2e-40;
ive 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human insulin like growth factor 1 Ea isoform.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ¥.
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                                                                                                                                                      Disclosure; Fig 13; 115pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAPLKPAKAARSVRAQRHTDMPKTQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
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(UNLO) UNIV COLLEGE LONDON.

15-NOV-2000; 2000WO-GB04354

25-MAY-2001.

15-NOV-1999;

(UNLO) ROYAL FREE HOSPITAL SCHOOL MED.

Goldspink

; 0

; 0

Length 156;

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1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDHRRLEMY 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The goat IGF precursor is useful for the preperation of IGF-1 which is used for growth of bone and the therapy of tumours. The IGF-1 precursor is prepared by inserting the coding sequence into an
                                                                                                                                                                                                                                                                                                                        The sequence is human prepro-somatomedin-C. DNA probes prepared against DNA encoding the protein sequence may be used to detect the presence of the genes in a natural source. The probes may be used to detect mutations and/or deletions in humans suffering from growth deficiencies.

See also AAN60489, AAN60491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goat insulin-like growth factor I - useful for prepn. of insulin-like growth factor I used for growth of bone and tumour
                                                                                                                                                                                         Pre:pro insulin-like growth factors I and II - obtd. from the human genome by e.g. screening a cDNA library obtd. from human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Goat Insulin like growth factor 1 (IGF-1) precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 458; DB 7;
Pred. No. 8.1e-40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Insulin; growth factor; bone; tumour therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rall LB, Merryweather JP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR40844 standard; Protein; 154 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                  Disclosure; Fig 1; 20pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 2; Figure 1; 6pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         76.18;
84US-0630557.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 84; Conservative
                                                                                                                            WPI; 1986-042104/06.
N-PSDB; AAN60490.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1993-284680/36.
N-PSDB; AAQ47804.
                                           (CHIR-) CHIRON CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              119 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (KOMA/) KOMANO T.
13-JUL-1984;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JP05199878-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Capra hircus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   02-DEC-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-DEC-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-AUG-1993.
                                                                                                                                                                                                                                           liver cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-MAR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAR40844;
                                                                                   Bell G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       75
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                                                                                                                                                                                                                                                                             an Insulin-like Growth Factor I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder including a disorder of motoneurones and/or neurodegenerative disorder, e.g., amyorrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, progressive poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with aging, autosomal or sex-linked muscular dystrophy, diabetic neuropathy, peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is alternative version of rabbit liver-type IGF-I isoform (L.IGF-I). The L.IGF-I protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4 and 6.

Note: The present sequence is stated as being the same as SEQ ID NO:14 shown in sequence listing (AAE02452) of the specification. However
                                                                                                                                                     Ø
                                                                                                                            Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of medicament for the treatment of neurological disorder
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                                                                                                                                                                                                                                                             The present invention relates to use of mechano-growth factor (MGF),
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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Pred. No. 2.7e-40;
2; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /label= mature somatomedin-C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                Disclosure; Fig 10; 66pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  76.78;
97.78;
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                    Goldspink G, Johnson I;
                                                          WPI; 2001-355620/37.
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Query Match

Matches

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expression vector, transforming a host cell with the expression vector, culturing the transformed cell and retrieving the \rm IGF-1 precursor from the culture supernatant.
                                                                                              154 AA;
                                                                                              Sequence
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1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60

61 CAPLKPAKAARSVRAQRHTDMPKTQK 86 |||||| | :||||||||||| || 110 CAPLKPTKSARSVRAQRHTDMPKAQK 135

Search completed: October 25, 2002, 15:57:10 Job time: 25.4096 secs

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sequence 9, Appli
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Sequence 41, Appli
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1 GPETLCGAELVDALQFVCGD.....TNKKMKSQRRRKGSTFPEHK 111
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/cgn2_6/ptodata/1/iaa/6A_COWB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COWB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COWB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COWB.pep:*
GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd
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US-08-950-720A-9

US-08-219-72A-9

US-08-142-583A-11

5405942-114-583A-11

US-08-18-989-251-41

US-09-340-250-41

US-09-340-250-41

US-09-340-250-41

US-09-340-250-41

US-09-40-971A-47

US-08-167-641C-47

US-08-462-040-47

US-08-462-040-47

US-07-947-035-11

US-07-947-035-11

US-07-947-035-11

US-08-462-018-17

US-07-958-903A-17

US-08-462-018-17

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PCT-US93-11458-1
PCT-US95-08925-1
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US-07-963-329A-1
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                                                                                                                               October 25, 2002, 15:55:52
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Gapop 10.0 , Gapext 0.5
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Maximum DB seq length: 200000000
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Sequence 12, Appl
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Sequence 8, Appl
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Sequence 4, Application US/09142583A
Patent No. 6221842
GENERAL INFORMATION:
APPLICAT: GOLDSPINK, GEOFFREY
TITLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 602; DB 4; Length 121; 100.0%; Pred. No. 2.8e-64; Live 0; Mismatches 0; Indels
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APPLICATION NUMBER: WO PCT/GB97/00658
FILING DATE: 11-MAR-1997
APPLICATION NUMBER: GB 9605124.8
FILING DATE: 11-MAR-1996
ATTORNEY/AGENT INFORMATION:
NAME: SADOFF, B. J.
REGISTRATION NUMBER: 36663
                                                                                                               US-08-240-121-12
US-08-411-241-12
PCT-US93-11298-28
US-09-029-267-14
US-09-029-267-14
US-09-029-267-14
US-08-989-251-39
US-08-989-251-39
US-09-340-250-39
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US-08-180-572-5
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ZIP: 22201
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/NS-DOS
SOFTWARE: PATENTIN Release #1.0, Vers
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/142,583A
FILING DATE: 29-OCT-1998
CLASSIFICATION: <UNKNOWN>
                                                                                  US-08-161-044-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: NIXON & VANDERHYE P.C. STREET: 1100 NORTH GLEBE ROAD CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 117-263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DESCRIPTION: SEQ ID NO: 4:
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Matches 111; Conservative
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    MOLECULE
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11 GPETLCGAELVDALQEVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                       RESULT 2
US-07-93-230A-10
Sequence 10, Application US/07953230A
Sequence 10, Application US/07953230A
Patent No. 5476779
GENERAL INFORMATION:
APPLICANT: CHEN, Thomas T
TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED
TITLE OF INVENTION: FROM RAINBOW TROUT
UNDERSONDENCE ADDRESS:
ADDRESSEE: Burns, Doane, Swecker & Mathis
STREET: George Mason Bidg., Washington & Prince Sts.
CITY: Alexandria
                                                                               61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRKGSTFEEHK 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 77.2%; Score 465; DB 1; Length 137; 98.8%; Pred. No. 6.3e-48; Live 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note~ "Gap of 27 after 116."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/953,230A
FILING DATE: 30-SEP-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "Gap of 2 after 7."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "Gap of 1 after 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CTAIN-FEURY, Sharon E
REGISTRATION NUMBER: 36,113
REFERENCE/DOCKET NUMBER: 028755-010
TELECOMMUNICATION INFORMATION:
TELEFAX: (703) 836-2021
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    93 CAPLKPAKSARSVRAQRHTDMPKTQK 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 137 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 98.89
Matches 85; Conservative
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; OTHER INFORMATION:
US-07-953-230A-10
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OTHER INFORMATION:
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OTHER INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE: Virginia
COUNTRY: United
ZIP: 22313-1404
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      77.2%; Score 465; DB 3; Length 152; 98.8%; Pred. No. 7.1e-48; Live 1; Mismatches 0; Indels
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APPLICANT: Bradford A. Jameson and Renato Baserga TITLE OF INVENTION: IGF-1 Analogs
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Woodcock Washburn
ADDRESSEE: Kurtz Mackiewicz & No. 5473054ris
                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM: DOS
SOFTWARE: FastSEO for Windows Version 2.0
CURRENT APPLICATION DATA:
                       Sequence 9, Application US/08950720A
Patent No. 6046028
GENERAL INFORMATION:
APPLICANT: Conklin, Darrell C.
APPLICANT: Lofton-Day, Catherine E.
APPLICANT: Lok, Si
APPLICANT: Jospers, Stephen R.
TITLE OF INVERTION: INSULIN HOMOLOG
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/950,720A FILING DATE: CLASSIFICATION: 435
PRIOR APPLICATION DATA: APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                   E: ZymoGenetics, Inc.
1201 Eastlake Avenue East
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
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; Patent No. 5473054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-442-6672
TELEFAX: 206-442-6678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Sawislak, Deborah A REGISTRATION NUMBER: 37,43 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: No. 6046028e
                                                                                                                                                                                                                                                                                                                                                                                                                                 IBM Compatible
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SEQUENCE CHARACTERISTICS:
LENGTH: 152 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 98.8
Matches 85; Conservative
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MEDIUM TYPE: Diskette
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CITY: Seattle
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US-08-950-720A-9
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US-08-219-878A-1
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49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
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Patent NO. 6221842.
GENERAL INFORMATION:
APPLICANT: GOLDSPINK, GEOFFREY
TITLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                 77.2%; Score 465; DB 5; Length 153; 98.8%; Pred. No. 7.2e-48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              77.2%; Score 465; DB 4; Length 156; 98.8%; Pred. No. 7.3e-48; tive 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
SEMTING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: WO PCT/GB97/00658
FILING DATE: 11-MAR-1997
APPLICATION NUMBER: GB 9605124.8
FILING DATE: 11-MAR-1996
ATTORNEY/AGENT INFORMATION:
NAME: SADOFF, B. J.
REGISTRATION NUMBER: 36663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/142,583A
FILING DATE: 29-Oct-1998
CLASSIFICATION: <UNKnown>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                            1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE: NIXON & VANDERHYE P.C. STREET: 1100 NORTH GLEBE ROAD CITY: ARLINGTON STATE: VA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 117-263 TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; TOPOLOGY: linear; SEQUENCE TYPE: protein; SEQUENCE DESCRIPTION: SEQ ID NO: 11: US-09-142-583A-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    109 CAPLKPAKSARSVRAQRHIDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                           61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
    REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJU-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
INFORMATION FOR SEO ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 156 amino acids
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Best Local Similarity 98.89
Matches 85; Conservative
                                                                                                                                                                                                                                                                                                            85; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: USA
ZIP: 22201
                                                                                                                                                                       TYPE: AMINO ACID TOPOLOGY: linear
                                                                                                                                                                                                                                                                                        Best Local Similarity
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US-09-142-583A-11
                                                                                                                                                                                                                      PCT-US93-04329-1
                                                                                                                                                     LENGTH:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             77.2%; Score 465; DB 1; Length 153; 98.8%; Pred. No. 7.2e-48; Live 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Bradford A. Jameson and Renato Baserga
TITLE OF INVENTION:
IGF-1 Analogs
NUMBER OF SEQUENCES: 7
CORRESPONDENCES: 7
CORRESPONDENCE MOODGOCK Washburn
ADDRESSEE: Woodcock Washburn
STREET: One Liberty Place - 46th Floor
CITY: Philadelphia
                                                                                                            MEDLUM TYPE: DISKETTE, 3.5 INCH, 1.44 Mb STORAGE COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-nnc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
COMPUTER: IBM PS/2/2
OPERATING SYSTEM: PC-DOS
SOFTWARE: WORDPERFECT 5.0
CURRENT APPLICATION DATA:
: One Liberty Place - 46th Floor Philadelphia
                                                                                                                                                                                    SOFTWARE: WORDERFEET 5.1

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/219,878A

FILING DATE: 30-MAR.1994
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION ON MAY.1992
ATONNEY AGENT INFORMATION:
NAME: MARK DELUCA
REGISTRATION NUMBER: TJU-1240
REGISTRATION NUMBER: TJU-1240
REGISTRATION NUMBER: TJU-1240
REFERENCE/DOCKET NUMBER: TJU-1240
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3100
INFORMATION FOR SEQ. ID NO: 1:
FENDENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .umbER: PCT/US93/04329
19930507
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/881,524
FILING DATE: 08-MAY-92,
ATTORNEY/AGENT INFORMATION:
NAME: MATK DELUCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 98.8
Matches 85; Conservative
                                                               COUNTRY: USA ZIP: 19103 COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
FILING DATE: 199305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         amino acid
GY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19103
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-219-878A-1
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Gaps

41:

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INFORMATION FOR SEQ ID NO:
                  SEQUENCE CHARACTERISTICS:
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Matches
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                               Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 458; DB 6; Length 119;
Pred. No. 3.6e-47;
1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 41, Application US/08989251
Patent No. 6017731
GENERAL INFORMATION:
APPLICAMT: Tekamp-01son, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
TITLE OF INVENTION: PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          : Bell Seltzer IP Group of Alston & Bird, LLP 3605 Glenwood Ave. Suite 310
                                                                                                                                                                                            5405942-1
;Patent No. 5405942
; APPLICANT: BELL, GRAEME I.;RALL, LESLIE B.;MERRYWEATHER,
                                                                                                                                                                                                                                                                   ; TITLE OF INVENTION: PREPRO INSULIN-LIKE GROWTH FACTORS; I AND II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-00S/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/989,251
                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 16
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/65,673
FILING DATE: 16-JUN-1987
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 630,557
FILING DATE: 19-JUL-1984
                                                                                                     61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: 5784-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 CAPLKPAKAARSVRAQRHTDMPKTQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION:
TELEPHONE: 919 420 2202
TELEFAX: 919 881 3175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       76.1%;
ilarity 97.7%;
Conservative 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
es 84; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Raleigh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ns
                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET:
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Best Local S:
Matches 84
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                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO:1
                                                                                                                                                                                                                                                  JAMES P.
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                                                                                                                                                                                                                                        1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                             Length 191;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 191;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Tekamp-Olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
TITLE OF INVENTION: PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
ADDRESSEE: Bell Sellzer IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Sulte 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM: PC-FOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURENT APPLICATION DATA:
APPLICATION NUMBER: US/09/340,250
                                                                                                                                                             DB 3;
                                                                                                                                                           75.5%; Score 454.5; DB 3; 97.7%; Pred. No. 1.7e-46; ive 1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 454.5; DB 3
Pred. No. 1.7e-46;
1; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: IPM PC compatible

COMPUTER: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                           61 CAPLKPAKAA-RSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 CAPLKPAKAA-RSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 41, Application US/09340250 Patent No. 6083723 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION ATA:
APPLICATION NUMBER: 08/989,251
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          32,943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION:
TELEPHONE: 919 420 2202
TELEFAX: 919 881 3175
TYPE: amino acids
TOPOLOGY: line
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   75.5%;
97.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 191 amino acids
TYPE: amino acid
                                                                                                                                                                              Best Local Similarity 97.7
Matches 85; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                               ; MOLECULE TYPE: protein US-08-989-251-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 919 881 3175 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; MOLECULE TYPE: protein US-09-340-250-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
nes 85; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Raleigh
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                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-340-250-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY:
STATE:
                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
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ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           78 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; MOLECULE TYPE: peptide US-08-460-890A-47
                                                               Los Angeles
California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Los Angeles
STATE: California
                                                                           STATE: California
COUNTRY: U.S.A.
ZIP: 90071-2066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 74; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS
    ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          75.5%; Score 454.5; DB 4; Length 191; 97.7%; Pred. No. 1.7e-46; tive 1; Mismatches 0; Indels 1;
                                                                                                                                                                      APPLICANT: Tekamp-Olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
TITLE OF INVENTION: PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Suite 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 47, Application US/08460890A

Patent No. 5994109

CENERAL INFORMATION:

APPLICANT: Woo', Savio L.C.

APPLICANT: Cristiano, Richard J.

APPLICANT: Cristiano, Richard J.

APPLICANT: Gattchalk, Stephen

TITLE OF INVENTION: MUTLEIC ACID TRANSPORTER SYSTEMS AND TITLE OF INVENTION: METHODS OF USE

NUMBER OF EQUENCES: 65

CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                               COUNTRY: US
ZIP: 27622
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/528,108
146 CAPLKPAKSAKRSVRAQRHTDMPKTQK 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 5784-4
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919 420 2202
TELEPHONE: 919 881 3175
INFORMATION FOR SEQ ID NO: 41:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 CAPLKPAKAA-RSVRAQRHTDMPKTQK 86
                                                                                                                 Sequence 41, Application US/09528108
Patent No. 6312923
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/989, 251
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          : 191 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: protein 29-528-108-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        dery Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                              Raleigh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE
                                                                                                                                                                                                                                                                                                              CITY: Rale
STATE: NC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-460-890A-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                               US-09-528-108-41
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Patent No. 6033884

GENERAL INFORMATION:
APPLICANT: Woo, Savio L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gottchalk, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
CORRESPONDENCES: 65
CORRESPONDENCE ALDRESS:
ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         67.9%; Score 409; DB 2; Length 78; illarity 96.1%; Pred. No. 1.5e-41; Conservative 3; Mismatches 0; Indels
                                                     MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM PC. DOS 5.0
SOFTWARE: FastSEQ for Windows 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/460,890A
FILING DATE: June 5, 1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/167,641
FILING DATE: December 14, 1993
APPLICATION NUMBER: 07/855,389
FILING DATE: March 19, 1993
ATPORNEY/AGENT INFORMATION:
NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REGISTRATION NUMBER: 32,327
REGISTRATION NUMBER: 32,327
REGISTRATION NUMBER: 32,327
RELEPARS: (213) 489-1600
FILIERAX: (213) 955-0440
FILIERAX: (213) 955-0440
FILIERAX: (213) 955-0440
FILIERX: 67-3510
FILIERX: 67-3510
FILIERX: 67-3510
FILIERX: 67-3510
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: Storage
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4 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAP 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAP 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 4.7. Application US/08462040

Patent No. 617754

GENERAL INFORMATION:

APPLICANT: Woo, Savio L.C.

APPLICANT: Gritiano, Richard J.

APPLICANT: Gritiano, Richard J.

APPLICANT: Gritiano, Richard J.

APPLICANT: More Sequence:

TITLE OF INVENTION: METHODS OF USE

NUMBER OF SEQUENCES: 65

CORRESPONDENCE ADDRESS:

ADDRESSEE: Lyon & Lyon

ADDRESSEE: Lyon & Lyon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       67.9%; Score 409; DB 4; Length 78;
96.1%; Pred. No. 1.5e-41;
tive 3; Mismatches 0; Indels
APPLICATION NUMBER: US/08/460,971A
FILING DATE: June 5, 1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/167,641
FILING DATE: December 14, 1993
APPLICATION NUMBER: 07/855,389
FILING DATE: March 19, 1993
APPLICATION NUMBER: PCT/US93/02725
APPLICATION NUMBER: PCT/US93/02725
APPLICATION NUMBER: 22,327
APPLICATION NUMBER: 32,327
REGISTRATION NUMBER: 32,327
REGISTRATION NUMBER: 212/063
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEX: 67.9310
TELEX: 67.9310
SEQUENCE CHARACTERISTICS:
LENGTH: 78 anh.no acids
TYPE: annino acids
TYPE: Annoning: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE: Lyon & Lyon
STREET: Suite 4700
CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: Storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FastSEQ for Windows 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/462,040
FILING DATE: June 5, 1995
CLASSIFCATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/167,641
FILING DATE: December 14, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 96.1<sup>s</sup>
Matches 74; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64 LKPAKAARSVRAQRHTD 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TOPOLOGY: linear; MOLECULE TYPE: peptide US-08-460-971A-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 14
US-08-462-040-47
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAP 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 TLGGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAP 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 409; DB 3; Length 78;
Pred. No. 1.5e-41;
3; Mismatches 0; Indels
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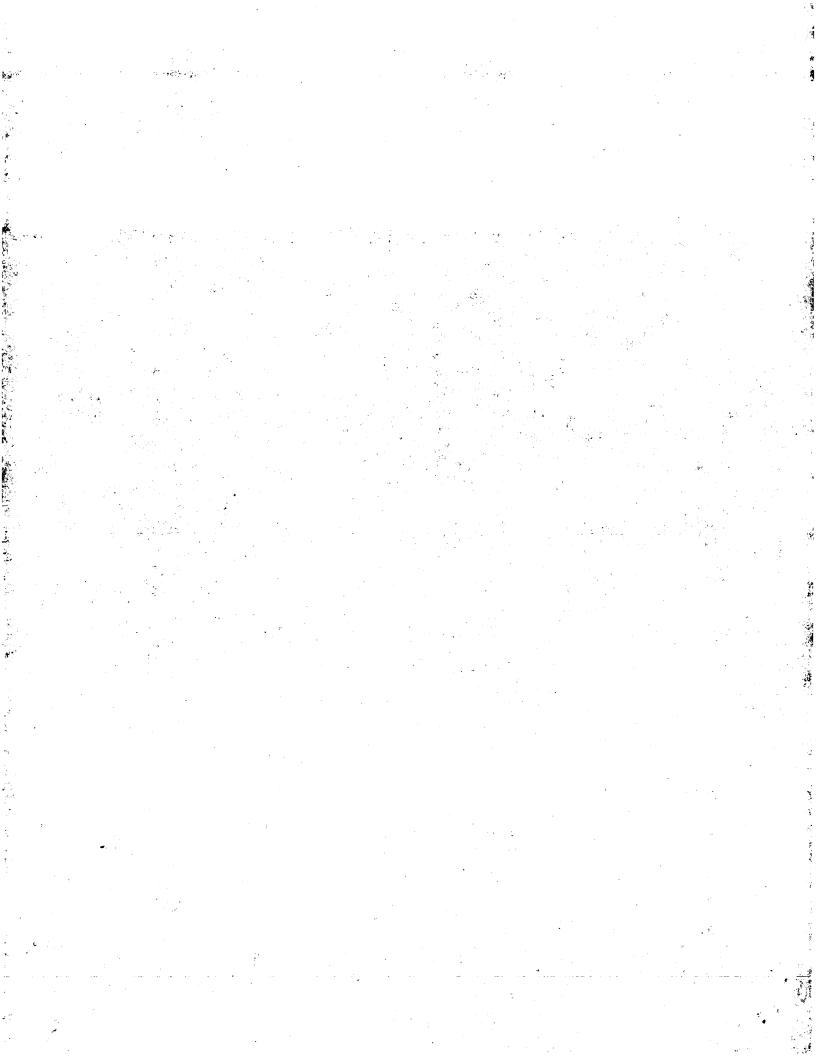
Patent No. 6150168
GENERAL INFORMATION:
APPLICANT: Woo, Savio L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gritchalk, Stephen
TITLE OF INVENTION: MCLEIC ACID TRANSPORTER SYSTEMS AND TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
CORRESPONDENCE ADDRESS:
                                      COMPUTER READBLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FastSEQ for Windows 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/167,641C
FILING DATE: December 14, 1993
CLASSIFICATION DATA:
PRICK CATION NUMBER: 07/855,389
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: March 19, 1993
ATTORNEY AGENT INFORMATION:
NAME: Warburg, Richard J.
REGISTRATION NUMBER: 205/012
REDECOMMUNICATION INFORMATION:
TELECOMMUNICATION NUMBER: 205/012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FASTSEQ for Windows 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
CITY: Los Angeles
STATE: Calliornia
COUNTRY: U.S.A.
2IP: 90071-2066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
LENGTH: 78 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      67.9%;
96.1%;
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Best Local Similarity 96.19
Matches 74; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: linear
MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF ENGUENCES: 12
CORRESPONDENCE ADDRESS:
ADDRESSEE: Burns, Doane, Swecker & Mathis
ADRESSEE: Burns, Doane, Swecker & Mathis
STREET: George Mason Bldg., Washington & Prince Sts.
CITY: Alexandria
STREET: Virginia
COUNTRY: United States
ZIF: 22313-1404
COMPUTER: READABLE FORM:
WEDIUM TYPE: Floppy disk
COMPUTER: BAR PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/953,230A
FILING DATE: 30-SEP-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: CHEN, Thomas T
APPLICANT: SHAMBLOTT, Michael J
TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED
TITLE OF INVENTION: FROM RAINBOW TROUT
                                                                                                                                                                                                                                                                                                                                                                                                                                       67.9%; Score 409; DB 4; Length 78
96.1%; Pred. No. 1.5e-41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 435
ATORNEY/AGENT INFORMATION:
NAME: Crane-Feury, Sharon E
REGISTRATION NUMBER: 36,113
REFERENCE/DOCKET NUMBER: 028755-010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 836-6620
TELEFAX: (703) 836-2021
INFORMATION FOR SEQ ID NO: 9:
APPLICATION NUMBER: 07/855,389
FILING DATE: March 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
                                                                                                      NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/POCKET NUMBER: 212/078
TELECOMMUNICALION INFORMATION:
TELEPHONE: (213) 489-1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 9, Application US/07953230A Patent No. 5476779 GENERAL INFORMATION:
                                                                                                                                                                                               TELEPAN: (213) 489-1600
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
LENGTH: 78 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 176 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 96.19
Matches 74; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           64 LKPAKAARSVRAQRHTD 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                 TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 15
US-07-953-230A-9
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GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.

protein search, using sw model OM protein - October 25, 2002, 15:52:51; Search time 6.68675 Seconds (without alignments) 642.745 Million cell updates/sec Run on:

Title: Perfect score: Sequence:

US-09-852-261-6 602 1 GPETLCGAELVDALQFVCGD.....TNKKMKSQRRRKGSTFEEHK 111

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

105224 Total number of hits satisfying chosen parameters:

105224 seqs, 38719550 residues

ched:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% .
Maximum Match 100%
Listing first 45 summaries

SwissProt_40:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

CITMMADTEC

		Description	Q95222 oryctolagus	P05018 mus musculu	P05019 homo sapien	4 rattu	P17647 cavia porce	homo s	2 canis	P16545 sus scrofa		P51457 capra hircu	m	P05017 mus musculu	P08025 rattus norv	coturni	P18254 gallus gall	snouns 8	P16501 xenopus lae	Q90326 cyprinus ca		P51458 equus cabal		090325 cyprinus ca	و	10	10	-	6	1 mustela	618 myxine	eduus c	P23695 sus scrofa	535	P01346 rattus norv
SUMMARIES		ΩI	IGF1_RABIT	IGFB_MOUSE	IGFB_HUMAN	IGFB_RAT	IGF1_CAVPO	IGFA_HUMAN	IGF1_CANFA	IGF1_PIG	IGF1_BOVIN	IGF1_CAPHI	IGF1_SHEEP	IGFA_MOUSE	IGFA_RAT		- 1	IGF1_SUNMU	IGF1_XENLA	IGFB_CYPCA	IGF1_ONCKI	IGF1_HORSE	IGF1_ONCMY	IGFA_CYPCA	IGF2_ONCMY	IGF2_SHEEP	IGF2_BOVIN	IGF2_HUMAN	IGF2_CAVPO	IGF2_MUSVI	IGF_MYXGL	IGF2_HORSE	IGF2_PIG	IGF2_MOUSE	IGF2_RAT
		DB	Н	Н	Н	Н	П	П	-	П	Н	ч	Н	Н	-	Н	П	~	П		Н		-	-	-	_	Н	Н	Н	-	П	Н	П	-	П
		Match Length	143	133	195		3	S	122	153	154	154	154	127	153	124	153	81	153	161	176	122	176	161	214	179	155	180	128	129	139	181	181	180	180
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		Score	602	539	536	508	465	465	460	460	460	456	452	450	447	419	419	417	412.5	403	402	400	398	393	272	242	236	232		229.5	229	229	229	227	224.5
	Result	NO.	-	7	3	4	5	9	7	œ	6	10	11	12	13	14	15	16	17	18	19	20	21	22 ·	23	24	25	26	27	28	29	30	31	32	33

P33717 gallus gall P07453 myoxocephal	P01336 gadus calla P01337 batrachoidi P01338 batrachoidi	P09536 hydrolagus P01327 chinchilla	P12708 zaocys dhum P12703 alligator m P01339 thursus thu	P07454 anser anser P01334 crotalus at
IGF2_CHICK INS_MYOSC	INS_GADCA INS1_BATSP INS2_BATSP	INS_HYDCO INS_CHIBR	INS_ZAODH INS_ALLMI INS? THITTH	INS_ANSAN INS_CROAT
		нн.		
99 20	51 50 50	59	51	51
36.4	26.3 25.8 25.6	25.1	24.8	24.3
219 159.5	158.5 155.5 154	151	149 148 146	146 146
34 35	36 37 38	39	441	444

ALIGNMENTS

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FLEAT G., Brem G., Mueller M.;
Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
-- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
-- ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
-- SUBCELLULAR LOCATION: Secreted.
-- ALTERNATIVE PRODUCTS: 2 ISOFORMS; IGF-IA AND IGF-IB (SHOWN HERE);
-- ALTERNATIVE PRODUCTS: 2 ISOFORMS; IGF-IA AND IGF-IB (SHOWN HERE);
-- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE; PS00262, INSULIN; 1.
Insulin family; Growth factor; Plasma; Signal; Alternative splicing.
                                                                                                                                                                                                                                         Oryctolagus cuniculus (Rabbit).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Lagomorpha, Leporidae, Oryctolagus.
                      IGFI_RABIT STANDARD; PRT; 143 AA.
095222; Oldberd; 135, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
116-OCT 116-OCT IRel. 40, Last annotation update)
116-OCT 1011 IRel. 40, Last annotation update)
116-OCT 116-OCT 116-OCT 100-OCT 10
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INSULIN-LIKE GROWTH FACTOR I
E PEPTIDE.
B.
C.
                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. (ISOFORM IGF-IA).
STRAIN-ZIKA;
Flekna G., Brem G., Mueller M.;
Submitted (NOV-1996) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Interpro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRIMYS; PR00276; INSULINA.
PRINYS; PR00277; INSULINB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ProDom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      [2]
SEQUENCE FROM N.A. (ISOFORM IGF-IB).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AF022961; AAB80950.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; U75390; AAB48032.1;
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102
143
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94
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                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                33
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IGF1_RABIT
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BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
YOPSTHKKKKSORRERGSTFEEHK -> EVHLKNTSRGSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -:- SUBCELLULAR LOCATION: Secreted.
-:- ATTERNATIVE PRODUCTS: 2 ISOFORMS; ISOFORM IGF-IA (AC P05017) AND ISOFORM IGF-IB (SHOWN HERE); ARE PRODUCED BY ALTERNATIVE SPLICING-:-- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                        Gaps
                                                                                                                                                                                                          9
                                                                                                                                                                                                                         13 GPETLCGAELVDALQEVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bell G.I., Stempten M.M., Fong N.M., Rall L.B.;
"Sequences of liver cDNAs encoding two different mouse insulin-like growth factor I precursors.",
Nucleic Acids Res. 14:787-782(1986).
-i- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ProDom; PD001048; Insulin_IGF_relaxin; 1.
SWART; SMO078; INEF; 1.
PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                        1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                        .,
                                                                                                                                                                                                                                                                                                                                                                                                                         13-AUG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence update)
13-AUG-1987 (Rel. 39, Last sequence update)
130-MAR-2000 (Rel. 39, Last annotation update)
1nsulin-like growth factor IB precursor (IGF-IB) (Somatomedin).
IGF1 OR IGF-1.
                                                                                                                                                                                                                                                                                           CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRKGSTFEEHK 143
                                                                                                                                                                                                                                                                         61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRKGSTFEEHK 111
                                                                                                                                     Length 143;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INSULIN-LIKE GROWTH FACTOR IB
                                                                                    GNKNYRM (IN ISOFORM IGF-IA).
819AF577800A1B1A CRC64;
                                                                                                                                                                        Indels
                                                                                                                                                                        ö
                                                                                                                                     100.0%; Score 602; DB 1; 100.0%; Pred. No. 2.8e-56;
                                                                                                                                                                                                                                                                                                                                                                                             133 AA.
                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HSSP, POSO19, IGE1.
MGD; MGI:96432; IGE1.
MGD; MGI:96432; Igfl.
TherPro; IPR000739; Insulin_IGF_relaxin.
Pfam: PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=87040760; Pubmed=3774549;
                                                                                                     143 AA; 16091 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; X04482; CAA28170.1; -. PIR; B25540; B25540.
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                                                                                                                                                                        Matches 111; Conservative
                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
 102
80
93
84
143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            musculus (Mouse).
                                                                                                                                                     Similarity
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P05018;
DOMAIN
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Best Local 9
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"Organization and sequence of the human insulin-like growth factor gene. Alternative RNA processing produces two insulin-like growth factor I precursor peptides.";
J. Biol. Chem. 261:4828-4832(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-78130171; PubMed-632300;
Rinderknecht E., Humbel R.E.;
The aminon acid sequence of human insulin-like growth factor I and
its structural homology with proinsulin.";
J. Biol. Chem. 253:2769-2776(1978).
                                                                                                                                                                         1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rotwein P.; "Two insulin-like growth factor I messenger RNAs are expressed in
                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                  13-AUG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin C).
IGF1 OR IBP1.
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"Organization of the human genes for insulin-like growth factors
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"Insulin-like growth factor II precursor gene organization in relation to insulin gene family.";
Nature 310:777-781(1984).
                                                                                                                                                                                                                                          61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRKGSTFEEHK 111
                                                                                                                     Length 133;
                                                                                                                                                Indels
                                                                                          B8E5C05B8BD62502 CRC64;
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                                                                                                                      Score 539; DB 1;
Pred. No. 1e-49;
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C.
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D.
E. PEPTIDE.
BY SIMILARITY.
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MEDLINE-86168194; PubMed-2937782;
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                                                                                          14915 MW;
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91.0%;
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84
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=89207850; PubMed=3242681;
Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.;
Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.;
Raschdorf F., Dahinden B., Maerki W., Richter W.J., Merryweather J.P.;
Riccation of disulphide bonds in human insulin-like growth factors
[IGFs] synthesized by recombinant DNA technology.";
Biomed. Environ. Mass Spectrom. 16:3-8(1988).
-!- FUNCTION: THE INSULIN-LIKE GROWTH PROTORIX RELATED TO INSULIN BUT HAVE A
MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
-!- SUBCELLUIAR LOCATION: Secreted.
-!- SUBCELLUIAR LOCATION: Secreted.
-!- ALTERNATIVE PRODUCTS: TWO FORMS OF IGF-1, IGF-IA AND IGF-IB ARE
PRODUCED BY ALTERNATIVE SPLICING.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                Sato A., Nishimura S., Ohkubo T., Kyogoku Y., Koyama S., Kobayashi M., Yasuda T., Kobayashi Y.;
"IH-NMR assignment and secondary structure of human insulin-like growth factor-I (IGF-I) in solution.";
J. Biochem. 111:529-536(1992).
                                                                                                                                                                                                       Cooke R.M., Harvey T.S., Campbell I.D.; "Solution Structure of human insulin-like growth factor 1: a nuclear magnetic resonance and restrained molecular dynamics study."; Biochemistry 30:5484-5491(1991).
3D-STRUCTURE MODELING.
MEDLINE-83210259; PubMed=6189745;
Blundell T.L., Bedarkar S., Humbel R.E.;
Tertiary structures, receptor binding, and antigenicity of insulininke growth factors.";
Fed. Proc. 42:2592-2597(1983).
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Insulin family; Growth factor; 3D-structure; Plasma; Allernative splicing; Signal.
SIGNAL 1 21 POTENTIAL.
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Pfam; PF00049; Insulin; 1.
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PRNINTS; PR00277; INSULINB.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
SWART; SW00078; IIGF; 1.
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AAA52537.1; U
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AAA52539.1; CAA27250.1; A
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CAA27153.1;
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IGHU1B.
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A26181; A26181.
S30540; S30540.
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X03421;
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MIM; 147440;
MIM; 265850;
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49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Shimatsu A., Rotwein P.; "Mosaic evolution of the insulin-like growth factors. Organization, sequence, and expression of the rat insulin-like growth factor I gene.";
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01-FBB-1991 (Rel. 17, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-11ke growth factor IB precursor (IGF-IB) (Somatomedin).
IGF1 OR IGF-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 536; DB 1; Length 195;
Pred. No. 3.2e-49;
2; Mismatches 2; Indels
INSULIN-LIKE GROWTH FACTOR IB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  109
21841 MW; E88A8CFBD1CD1873 CRC64;
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                                                                                                                 PEPTIDE
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MEDLINE=87222423; PubMed=3034909;
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Matches 98; Conservative
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130 AA

STANDARD;

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                                                                                                                                                                                                                                                                                                                 Bell G.I., Stempien M.M., Fong N.M., Scino S.;
"Sequence of a cDNA encoding guinea pig IGF-I.";
Nucleic Acids Res. 18:4275-4275(1990).
-!- FUNCTION: THE INSULIN-LIRE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                                  Cavia porcellus (Guinea pig).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
                                                                                                               Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
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-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                  01-AUG-1990 (Rel. 15, Created)
01-AUG-1990 (Rel. 15, Last sequence update)
01-FEB-1994 (Rel. 28, Last annotation update)
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Insulin family; Growth factor; Plasma; Signal.
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Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PROMOZOT; INSULINA.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
                                                                                                                                                                                                                                                                                                 MEDLINE=90332447; PubMed=2377480;
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                                                                                                                                                                                                                                                         SEQUENCE FROM N.A. TISSUE=Pancreas;
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HSSP; P05019; IGF1
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              IGF1 CAVPO
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                                                                                                                                                                                                                                                 WUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-!- SUBCELLULAR LOCATION: Secreted.
-!- ALTERNATIVE PRODUCTS: 2 ISOPORMS; ISOFORM IGF-IA (AC P08025) AND ISOFORM IGF-IB (SHOWN HERE); ARE PRODUCED BY ALTERNATIVE SPLICING.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
                                                                                                                                                                                                                 PLASMA,
                                                                                                                                                                                                                                        HAVE A
                                                                                                                             Nakamura S., Niwa M., Zapf J.;
"Primary structure of rat insulin-like growth factor-I and its
                                                                                                                                                                   biological activities.";
J. Biol. Chem. 264:5616-5621(1989).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM ARE STRUCTURALLY RELATED TO INSULIN BUT
                                                                SEQUENCE OF 49-118.
MEDLINE-89174609; PubMed=2538424;
Tamura K., Kobayashi M., Ishii Y., Tamura T., Hashimoto K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INSULIN-LIKE GROWTH FACTOR IB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 508; DB 1; Length 181; Pred. No. 2.5e-46;
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BY SIMILARITY.

APL -> VRC (IN REF. 2).

52BAB431875A1A06 CRC64;
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Pfam; PF00049; Insulin; 1.
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SMART; SM00078; IlGF; 1.
          id splicing.";
1. Endocrinol. 2:1115-1126(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; M15649; AAA41214.1; JOINED.
EMBL; X06107; CAA29480.1; ALT_SEQ.
EMBL; M15480; AAA41385.1; ALT_SEQ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; M15648; AAA41214.1; JOINED.
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88.78;
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PRINTS; PR00277; INSULINB.
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PIR; A26859; A26859.
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acid splicing.
Mol. Endocrit
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B. SIMILARITY.
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BY SIMILARITY.
BY SIMILARITY.
A 251B20AEDC5729FF CRC64;
465; DB 1; Length
A 65; DB 1; Length
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Pred. No. 5.6e-42;
1; Mismatches 0; Indels
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Matches 85; Conservative
                                                                                                                                                                                             130 AA;
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RESULT 5

1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60

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Local Similarity

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INSULIN-LIKE GROWTH FACTOR I.

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MEDLINE-92186627; PubMed-1372070;
Sandberg Nordqvist A.C., Stahlbom P.A., Lake M., Sara V.R.;
"Characterization of two cDNAs encoding insulin-like growth factor 1
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Rotwein and sequence of the human insulin-like growth factor
gene. Alternative RNA processing produces two insulin-like growth
factor I precursor peptides.";
J. Biol. Chem. 261:4828-4832(1986).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=78130171; PubMed=632300;
Rinderknecht E., Humbel R.E.;
"The amino acid sequence of human insulin-like growth factor I and
                                                                                                                                                                                                                                                                                                              MEDLINE-84068210; PubMed-6358902; Jansen M., van Schaik F.M.A., Ricker A.T., Bullock B., Woods D.E., Gabbay K.H., Nussbaum A.L., Sussenbach J.S., van den Brande J.L.; "Sequence of cDNA encoding human insulin-like growth factor I precursor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           le Bouc Y., Dreyer D., Jaeger F., Binoux M., Sondermeyer P., "Complete characterization of the human IGF-I nucleotide sequence isolated from a newly constructed adult liver cDNA library."; FEBS Lett. 196:108-112(1986).
13-AUG-1987 (Rel. 05, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin C).
                                                                                            Craniata; Vertebrata; Euteleostomi;
Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Complete nucleotide sequence of the high molecular weight human
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Dull T.J., Gray A., Hayflick J.S., Ullrich A.;
Insulin-like growth factor II precursor gene organization in relation to insulin gene family.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Steenbergh P.H., Koonen-Reemst A.M.C.B., Cleutjens C.B.J.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            lochem. Biophys. Res. Commun. 175:507-514(1991).
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                                                                                                                                                              SEQUENCE FROM N.A. MEDLINE-86168194; PubMed-2937782;
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MEDLINE-91207342; PubMed=2018498;
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                                                    IGFI OR IBPI.
Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEBS Lett. 195:179-184(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                      Nature 306:609-611(1983).
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MEDINE-89207850;

Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.;

Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.;

Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.;

Roschdorf G. Gisulphide bonds in human insulin-like growth factors

(IGFs) synthesized by recombinant DNA technology.";

Biomed. Environ. Mass Spectrom. 16:3-8(1988).

I- FUNCTION. THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,

ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A

MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

I- SUBCELLULAR LOCATION: Secreted.

I- ALTERNATIVE PRODUCTS: TWO FORMS OF IGF-1, IGF-IA AND IGF-IB ARE

PRODUCED BY ALTERNATIVE SPLICING.

I- SIMILARITY: BELONGS TO THE INSULINIGFRELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sato A., Nishimura S., Ohkubo T., Kyogoku Y., Koyama S., Kobayashi M.,
Yasuda T., Kobayashi Y.;
                                                                                                                                                                                                                                                               nuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "1H-NMR assignment and secondary structure of human insulin-like growth factor-I (IGF-I) in solution."; J. Biochem. 111:529-536(1992).
                                                                                                                                                    STRUCTURE BY NMR.
MEDLINE-91242464; PubMed-2036417;
CCOVE R.M., Harvey T.S., Campbell I.D.;
"Solution structure of human insulin-like growth factor 1: a n magnetic resonance and restrained molecular dynamics study.";
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                                 of
Blundell T.L., Bedarkar S., Humbel R.E.;
"Tertiary structures, receptor binding, and antigenicity
insulnite growth factors.";
Fed. Proc. 42:2592-2597(1983).
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Insulin family; Growth factor; Plasma; 3D-structure;
Alternative splicing; Signal.
SIGNAL 1 21
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Pfam; PF00049; Insulin; 1.
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SMART; SM00078; IlGF; 1.
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EMBL, M12659; AAA52538.1; JOINED.
EMBL, M14154; AAA52538.1; JOINED.
EMBL, X00173; CAA2538.1; JOINED.
EMBL, X0549; CAA27250.1; ALT_SEQ.
EMBL, X03543; CAA27250.1; ALT_SEQ.
EMBL, X03420; CAA27152.1; -...
EMBL, X03421; CAA27154.1; -...
EMBL, X03422; CAA27154.1; -...
EMBL, X03422; CAAA1342.1; -...
EMBL, X50725; CAA40342.1; -...
EMBL, X56773; CAA40342.1; -...
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3GF1; 15-APR-93
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PDB;
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 EMBL; L08254; -; NOT_
PIR; PN0622; PN0622.
HSSP; P05019; 1GF1.
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P16545;
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                                                                                                                                                                                                                                                                                               49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PEQUENCE FROM N.A.

REQUENCE FROM N.A.

REDIATE=93386192; PubMed=8359700;

RA MEDLINE=93386192; PubMed=8359700;

RA Delafontaine P., Lou H., Harrison D.G., Bernstein K.E.;

RA Gene 130:305-306[1993].

C. -- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA, CC

ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A CC

MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

CC -1- SUBCELLULAR LOCATION: Secreted

-1- SUBCELLULAR LOCATION: Secreted

-1- SUBCELLULAR LOCATION: Secreted

-1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

-1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

-1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

-1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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Canis.
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                                                                                                                                                                                                                                                                                                                                                                                                          01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
01-NOV-1997 (Rol. 35, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
                                                                                                                                                                                                                                                Score 465; DB 1; Length 153;
Pred. No. 6.7e-42;
1; Mismatches 0; Indels
          INSULIN-LIKE GROWTH FACTOR IA.
                                                                                                                                                                                                                     109
17026 MW; C6ECD92DCA9B37BC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Canis familiaris (Dog).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae;
                                                                                                                                                                                                                                                                                                                                                                                           122 AA
                                                        PEPTIDE
                                                                                                                                                                                                                                                                                                                                     109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                          61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                 77.2%;
98.8%;
                                                                                                                                                                                                                                                                    85; Conservative
                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
153 AA;
                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 85; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9615;
                  (Fragment).
IGF1 OR IGFIA.
                                                                                                                                                                                                                                                                                                                                                                                         IGF1_CANFA
P33712;
                                                                DISULFID
DISULFID
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SEQUENCE
                                                                                   DISULFID
                 DOMAIN
DOMAIN
DOMAIN
DOMAIN
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Weller P.A., Dickson M.C., Huskisson N.S., Dauncey M.J., Buttery P.J.,
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MEDLINE=89096956; PubMed=3211153;
Tavakkol A., Simmen R.A., Simmen R.C.M.;
"Porcine insulin-like growth factor-I (pIGF-I): complementary
deoxyribonucleic acid cloning and uterine expression of messenger
ribonucleic acid encoding evolutionarily conserved IGF-I peptides.";
Mol. Endocrinol. 2:674-681(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "The porcine insulin-like growth factor-I gene: characterization and expression of alternate transcription sites.";
J. Mol. Endocrinol. 11:201-211(1993).
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MEDLINE-90221822; PubMed-23.colus,
Mueller M., Brem G.;
"Nucleotide sequence of porcine insulin-like growth factor. 1:5'
"Nucleotide region, exons 1 and 2 and mRNA.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-AUG-1990 (Rel. 15, Created)
01-AUG-1990 (Rel. 15, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C.
A.
D. PEPTIDE.
67 BY SIMILARITY:
90 BY SIMILARITY:
70 BY SIMILARITY:
71 BY SIMILA
                                                                                                                                                                                                           PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Signal.
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                                                                                                                                                                                                                                                                                                                                                                            SIMILARITY
                                                                                                     ProDom; PD001048; Insulin_IGF_relaxin; 1. SMART; SM00078; IlGF; 1.
InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
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STRAIN=WHITE LANDRACE; TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
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Mammalia; Eutheria; Cetartioda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13407 MW;
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llarity 97.7%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         122 AA;
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nes 84; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                MEDLINE-88268820; PubMed-3390164;
Francis G.L., Upton F.M., Ballard F.J., McNeil K.A., Wallace J.C.;
"Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences
and biological activities compared with those of a potent truncated
                                                                                                     Schmidt A., Einspanier R., Amselgruber W., Sinowatz F., Schams D., "Expression of insulin-like growth factor 1 (1GF-1) in the bovine oviduct during the oestrous cycle."; Exp. Clin. Endocrinol. 102:364-369(1994).
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Honegger A., Humbel R.E.;
"Insulin-like growth factors I and II in fetal and adult bovine
serum. Purification, primary structures, and immunological
cross-reactivities.";
"Nucleotide sequence of the bovine insulin-like growth factor (IGF-1) and its IGF-1A precursor."; Nucleic Acids Res. 18:676-676(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Biochem. J. 251:95-103(1988).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 460; DB 1; Length 154;
Pred. No. 2.2e-41;
1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
SUBCELLULAR LOCATION: Secreted.
SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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64201B6AF3140999 CRC64;
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EMBL; S76122; AAD14209.1; -.
PIR; A25623; IGBO1.
PIR; S00465; S00465.
PIR; S12672; S12672.
HSSP; P05019; IGF1.
INTERPO; IPR000739; Insulin_IGF_relaxin.
PFam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
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BY SIMILARITY.
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1; Mismatches
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C.
A.
D.
E PEPTIDE.
                                                                      SEQUENCE OF 50-119 FROM N.A.
MEDLINE=95172127; PubMed=7867698;
                                                                                                                                                                                                                                                                                                              Biol. Chem. 261:569-575(1986).
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nes 84; Conservative
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PROSITE; PS00262; INSUL
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SEQUENCE OF 50-119.
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Matches
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                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
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Sukaryota Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GPETLCGAELVDALOFVCGDRGFYFNKPTGYGSSSRRAPOTGIVDECCFRSCDLRRLEMY
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01-OCT-1996 (Rel. 34, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INSULIN-LIKE GROWTH FACTOR I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 460; DB 1; Lengla -- Pred. No. 2.2e-41; Indels
                                                     SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY. 6098792DCDA0CD7D CRC64;
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PERM: PF00049; Insulin, 1.

PRINTS; PR00276; INSULINA.

PRINTS; PR00277; INSULINA.

PODOM: PD001048; Insulin_IGF_relaxin; 1.

SMART; SM0078; IIGF; 1.

PROSITE; PS00262; INSULIN; 1.

Insulin family; Growth factor; Plasma; Signal.
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E. PEPTIDE.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
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                                                                                                                                                                                                                                 EMBL; X17492; CAA35527.1; -.
EMBL; X52388; CAA36617.1; -.
EMBL; X52077; CAA36296.1; -.
EMBL; M31175; AAA31043.1; ALT_INIT.
                                    SUBCELLULAR LOCATION: Secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
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01-NOV-1991 (Rel. 20, Last sequ
01-OCT-1996 (Rel. 34, Last anno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17010 MW;
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ilarity 97.7%;
Conservative
                                                                                                                                                                                                                                                                                                            EMBL; X17638; CAA35632.1; -. PIR; A34938. PIR; S12825; S12825. HSSP; P05019; 1GF1.
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1118
153
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100
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Best Local Similarity
Matches 84; Conserv
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SEQUENCE

P07455

IGF1

IGF1_BOVIN

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75.7%;
96.5%;
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                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                         Caprinae; Ovis.
                         Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE=Liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE=Liver
                                              83;
                                                                                                                                                                                                                                               IGF1_SHEEP
P10763;
                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                         Bovidae;
                                   Local
                                                                                                                                                                                                                    RESULT 11
IGF1_SHEEP
                                                                                                                                           61
                                              Matches
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50 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109
                                                                                                                                                                                                                                                                                                                                                       MEDLINE=95290780; PubMed=772848;
Mikawa S., Yoshikawa G.-I., Yamano Y., Sakai H., Komano T., Hosoi Y.,
Utsumi K.;
                                                                                                                                                                                                                                                                                                                                                                                                                            growth factor-I (IGF-I) mRNAS.";
Biosci. Biotechnol. Biochem. 59:759-761(1995).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -1- TISSUE SPECIFICITY: EXPRESSED IN ALL TISSUES EXAMINED: BRAIN, LUNG, LIVER, SPLEEN, UTERUS, OVARY, TESTIS, HEART AND SKELETAL
                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea; Bovidae; Caprinae; Capra.
                                                                                                                                                                                                                                                                                                                                                                                                                  "Tissue- and development-specific expression of goat insulin-like
                                                                                                                                                                 01-OCT-1996 (Rel. 34, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY.
07238B6AF3068422 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Insulin family; Growth factor; Plasma; Signal.
                                                                                                                                       154 AA.
                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A., AND TISSUE SPECIFICITY. STRAIN-SHIBA; TISSUE-Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MUCH HIGHER GROWTH-PROMOTING ACTIVITY. SUBCELLULAR LOCATION: Secreted.
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PRINTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
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Pfam; PF00049; Insulin; 1.
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E PEPTIDE.
BY SIMILAR:
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                            61 CAPLKPAKAARSVRAQRHTDMPKTQK
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EMBL; D26119; BAA05115.1; --
EMBL; D11378; BAA01976.1; --
HSSP; P05019; 1GF1.
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                                                                                                                                      STANDARD;
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                                                                                                                                                                                                                                              Capra hircus (Goat).
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                                                                                                                                      IGF1_CAPHI
P51457;
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PAR REPRESENTATION OF THE PROPERTY AND PROPE

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50 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109
                                                                                                                                                                                                1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                   Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wong E.A., Ohlsen S.M., Godfredson J.A., Dean D.M., Wheaton J.E.; "Cloning of ovine insulin-like growth factor-I cDNAs: heterogeneity in the mRNA population."; DNA 8:649-657(1989).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ovis aries (Sheep).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Demmer J., Hill D.F., Petersen G.B.; Characterization of two sheep insulin-like growth factor II cDNAs with different 5' untranslated regions."; Biochim. Biophys. Acta 1173:79-80(1993).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dickson M.C., Saunders J.C., Gilmour R.S.;
"The ovine insulin-like growth factor-I gene: characterization,
expression and identification of a putative promoter.";
J. Mol. Endocrinol. 6:17-31(1991).
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01-FEB-1991 (Rel. 17, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
Score 456; DB 1; Len
No. 5.9e-41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               154 AA.
                                                                                            Pred. No. 5.96
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                    110 CAPLKPTKSARSVRAQRHTDMPKAQK 135
                                                                                                                                                                                                                                                                                                                                       CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE=Liver;
MEDLINE=91197361; PubMed=2015053;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=90126234; PubMed=2575490;
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MEDLINE=89323215; PubMed=2752053;
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GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRINTS; PR00276; INSULINA
                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SMART; SM00078; ILGF; 1
PROSITE; PS00262; INSUL
                                                                                                                                                                                                        Mus musculus (Mouse).
                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                            NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                  TISSUE=Liver;
                                                                                                                  IGFA_MOUSE
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SEQUENCE
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                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Gaps
       BLOCKLIN. BIOPHYS. ACTA 997:27-35(1989).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA, ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
-!- SUBCELLULAR LOCATION: Secreted.
-!- ALTERNATIVE PRODUCTS: 3 ISOFORMS, A, B (SHOWN HERE) AND C; ARE PRODUCED BY ALTERNATIVE SPLICING.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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D.
E PEPTIDE.
BY SIMILARITY.
BY SIMILARITY.
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BY SIMILARITY.
CONTROL -> MVTPT (IN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 452; DB 1; Length 15
Pred. No. 1.5e-40;
1; Mismatches 2; Indels
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MISSING (IN ISOFORM A).
A -> V (IN REF. 4).
E226CE6AF653CF3F CRC64;
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PIR; B33390, B33390.
PIR; S07188; S07198.
PIR; S07965; S07965.
INSSP; POS019; LGF1.
InterPro; IPR000739; Insulin_IGF_relaxin.
PF00049; Insulin; 1.
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96.5%;
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X69473; CAA49231.1;
X69474; CAA49231.1;
                                                                                                                                                                                                                                                                                                                                                                                                            X69475; CAA49231.1;
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X69475; CAA49232.1;
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AAA31547.1
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1110
101
adult sheep serum.";
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Matches 83; Conserv
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M31736;
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CONFLICT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         growth factor I precursors.";
Nucleic Acids Res. 14:7873-7882(1986).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bell G.I., Stempien M.M., Fong N.M., Rall L.B., "Sequences of liver cDNAs encoding two different mouse insulin-like
                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
SUBCELLULAR GROWTH-PROMOTING ACTIVITY.
SUBCELLULAR LOCATION: Secreted.
ALTERNATIVE PRODUCTS: 2 ISOFORMS; ISOFORM IGF-IA (SHOWN HERE)
AND ISOFORM IGF-IB (AC P05018); ARE PRODUCED BY ALTERNATIVE
SPLICING.
                                                                                                                                                                                                                                                    13.AuG-1987 (Rel. 05, Created)
13.AuG-1987 (Rel. 05, Last sequence update)
30.MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin).
IGF OR IGF-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INSULIN-LIKE GROWTH FACTOR IA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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Mismatches
                                                                                                                                                                                                    127 AA
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PIR; A25540; A25540.
HSSP; P05019; LGF1.
MGI:95432; Igf1.
InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
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ProDom; PD001048; Insulin_IGF_relaxin; 1.
                             PRT;
CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=87040760; PubMed=3774549;
                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metazoa, Chordata,
Mammalia, Eutheria, Rodentia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14120 MW;
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MEDILINE-87246437; PubMed-3595538;
Murphy L.J., Bell G.I., Duckworth M.L., Friesen H.G.;
"Identification, characterization, and regulation of a rat
complementary deoxyribonucleic acid which encodes insulin-like growth
                                                                                                                                                                                                                                                                                                                                                                                                                                      Casella S.J., Smith E.P., van Wyk J.J., Joseph D.R., Hynes M.A., Hoyt E.C., Lund P.K.; "Isolation of rat testis cDNAs encoding an insulin-like growth factor
 09
                        82
                                                                                                                                                                                                                               Rattus norvegiuus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
MEDIATS-89127259; PubMed=3221878;
MEDIATS-89127259; PubMed=3221878;
Roberts C.T. Lasky S.R., Lowe W.L., Seaman W.T., Leroith D.;
Structure of the rat insulin-like growth factor II transcriptional unit: heterogeneous transcripts are generated from two promoters by use of multiple polyadenylation sites and differential ribonucleic acid splicing.;
Mol. Endocrinol. 2:1115-1126(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              biological activities.";
J. Biol. Chem. 264:5616-5621(1989).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
          23 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                        Shimatsu A., Rotwein P., "Mosaic evolution of the insulin-like growth factors. Organizatic sequence, and expression of the rat insulin-like growth factor I
                                                                                                                                                                    01-FEB-1991 (Rel. 17, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-11ke growth factor IA precursor (IGF-IA) (Somatomedin).
IGF1 OR IGF-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nakamura S., Niwa M., Zapf J.; "Primary structure of rat insulin-like growth factor-I and its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=91103966; PubMed=1368571;
Kato H., Okoshi A., Miura Y., Noguchi T.;
"A new cDNA clone relating to larger molecular species of rat
insulin-like growth factor-I mRNA.";
Agric. Biol. Chem. 54:1599-1601(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tamura K., Kobayashi M., Ishii Y., Tamura T., Hashimoto K.,
                                                                                                                                          153 AA.
                                                               86
                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                           Biol. Chem. 262:7894-7900(1987).
                                                                                                                                                                                                                                                                                                             MEDLINE=87222423; PubMed=3034909;
                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=Testis;
MEDLINE=88003970; PubMed=3652906;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=89174609; PubMed=2538424;
                                                 61 CAPLKPAKAARSVRAQRHTDMPKTQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Endocrinology 121:684-691(1987).
                                                                                                                                                                  01-AUG-1988 (Rel. 08, Created)
                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6:325-330(1987).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               precursor
                                                                                                                                         IGFA_RAT
P08025;
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                   -:- SUBCELLULAR LOCATION: Secreted.
-:- ATTERNATIVE PRODUCTS: 2 ISOFORMS; ISOFORM IGF-IA (SHOWN HERE) AND ISOFORM IGF-IB (AC P08044); ARE PRODUCED BY ALTERNATIVE SPLICING.
-:- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
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ID IGF1_COTJA

ID IGF1_COTJA

ID IGF1_COTJA

STANDARD; PRT; 124 AA.

DT 01-0CT-1996 (Rel. 34, Created)

DT 01-0CT-1996 (Rel. 34, Last sequence update)

DT 16-0CT-2001 (Rel. 40, Last annotation update)

DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin)

GN IGF1.
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Pred. No. 5.1e-40;
Trespond 3; Indels
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966F3C0FA4EB3DE7 CRC64;
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MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
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InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
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SMART; SM00078; ILGF; 1.
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ALT_INIT.
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94.2%;
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                                                                                                                                                                                                                                                                                                             115651; AAA41215.1; J
115647; AAA41215.1; J
115648; AAA41215.1; J
115649; AAA41215.1; J
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PROSITE; PS00262
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M15648;
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Matches
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us-09-852-261-6.rsp

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gen. Comp. Endocrinol. 79:459-468(1990).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                            "Structure of the chicken insulin-like growth factor I gene reveals conserved promoter elements.";
J. Biol. Chem. 266:9724-9731(1991).
                                                                                                                                                                                Structure and expression of a chicken insulin-like growth factor I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=91106695; PubMed=2272467; Ballard F.J., Johnson R.J., Owens P.C., Francis G.L., Upton F.M., Medurtry J.P., Wallace J.C., adverse insulin-like growth factor-I: amino acid sequence, radioimmunoassay, and plasma levels between strains and during
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Pred. No. 4.4e-37;
4; Mismatches 6; Indels
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W; AAE13FDED13EE2F8 CRC64;
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Insulin family; Growth factor; Plasma; Signal
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SMART; SM00078; IlGF; 1.
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InterPro; IPR000739; Insulin_IGF_relaxin.
                                                                                                                                                                                                                                  Endocrinol. 3:1907-1913(1989).
                                                                                                                                                                                                                                                          [2]
SEQUENCE OF 1-21 FROM N.A.
MEDLINE-91236750; PubMed=2033062;
                                                                                                                                 MEDLINE=90190648; PubMed=2628728;
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EMBL; M74176; AAA48829.1; -.
PIR; A41399; A41399.
HSSP; P05019; 1GF1.
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SEQUENCE OF 49-118.
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Matches 76; Conserv
                                                                                                         SEQUENCE FROM N.A.
                                                       NCBI_TaxID=9031;
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                                                                                                                                                              Kajimoto Y.,
                                                                                                                                                                                                             precursor.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch)
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Coturnix coturnix japonica (Japanese quail).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                the oviduct of
                                                                                                                                                                                                   Kida S., Iwaki M., Nakamura A., Miura Y., Takenaka A., Takahashi S., Noguchi T.;
"Insulin-like growth factor-I messenger RNA content in the oviduct of Japanese quail (Coturnix coturnix japonica): changes during growth and development or after estrogen administration.";
comp. Biochem. Physiol. 109C:191-204(1994).
-i-FUNCTION: THE INSULIN-LIKE GROWTH FACTORS.
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
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01-NOV-1990 (Rel. 16, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
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Pred. No. 3.5e-37;
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SMART; SM00078; IlGF; 1.
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Insulin family; Growth factor; Plasma.
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                                                                                                                                                   SEQUENCE FROM N.A. MEDLINE=95187621; PubMed=7881819;
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88.4%;
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tes 76; Conserv
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Search completed: October 25, 2002, 15:57:35 Job time : 6.68675 secs

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October 25, 2002, 15:53:12; Search time 20.7289 Seconds (without alignments) 926.360 Million cell updates/sec
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602
1 GPETLCGAELVDALQFVCGD.....TNKKMKSQRRRKGSTFEEHK 111
GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                              OM protein - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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Perfect score:
Sequence:
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562222 Total number of hits satisfying chosen parameters: 562222 seqs, 172994929 residues ched:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

sp_plant:*
sp_rodent:*
sp_rodent:*
sp_virus:*
sp_vertebrate:*
sp_unclassified:*
sp_rins:*
sp_bacteriap:* sp_fungi:*
sp_human:*
sp_invertebrate:*
sp_mammal:* sp_mhc:* sp_organelle:* sp_phage:* SPTREMBL_19:*
1: sp_archea:*
2: sp_bacteria:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

sp_archeap:*

SUMMARIES

-	Description	013429 homo sapien	O9np10 homo sapien	014620 homo sapien	P79167 equus cabal	Ognici bos taurus	P97899 rattus sp.	093380 meleagris a	091230 oncorhynchu	Ogibio cyprinus ca	091475 salmo salar	091162 oncorhynchu	-091965 oncorhynchu	P81268 oncorhynchu	091231 oncorhynchu	091161 oncorbynchu	091476 salmo salar
	OI.	Q13429	Q9NP10	014620	P79167	09N1C1	P97899	093380	091230	091810	091475	091162	091965	P81268	091231	091161	Q91476
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a Query	Length	139	130	137	139	133	127	153	161	178	145	155	188	188	149	116	117
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	Score	564.5	465	465	462	460	447	419	404	403	402	402	402	402	398	396	395
Result	NO.	1	7	က	4	S	9	7	ω	6	10	11	12	13	14	15	16

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ALIGNMENTS

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Query Match 93.8%; Score 564.5; DB 4; Length 139; Best Local Similarity 95.5%; Pred. No. 4e-61; Matches 106; Conservative 1; Mismatches 3; Indels 1;

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MEDLINE=91187000; PubMed=2082190;
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"Human insulin-like growth factor I and II messenger RNA: isolation of complementary DNA and analysis of expression.";
Meth. Enzymol. 146:239-248(1987).
-! SUBCELDULAR LOCATION: SECRETED (BY SIMILARITY).
-! SUBLEARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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         GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                    30 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
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Catarrhini; Hominidae; Homo.
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                                                            90 CAPLKPAKSARSVRAQRHTDMPKTQKYQPPSTNKNTKSQ-RRKGSTFEERK 139
                                                  61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRKGSTFEEHK 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 130;
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                                                                                                                                                      Last sequence update)
Last annotation update)
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DBC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I PRECURSOR.
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                                                                                                                        130 AA
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HSSP; P01343; 1GF1.
InterPro; IPR000739; Insulin_IGF_relaxin.
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PRINTS; PR00277; INSULINB.
Probom; PD001048; Insulin_IGF_relaxin; 1.
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                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
NCBI_TaxID=9606;
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98.8%;
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                                                                                                                                                                                                Homo sapiens (Human).
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Tobin G., Yee D., Brunner N., Rotwein P.; "A novel human insulin-like growth factor I messenger RNA is expressed in normal and tumor cells."; Mol. Endocrinol. 4:1914-1920(1990).
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-!- ALTERNATIVE PRODUCTS: TWO ISOFORMS; ISOFORM IGF-IA (P51458) AND
ISOFORM IGF-IB (SHOWN HERE); ARE PRODUCED BY ALTERNATIVE SPLICING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            33 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 123-139 FROM N.A.

Nixon A.J., Toland B.D., Sandell L.J.;

Submitted (JAN-1997) to the BBL/GenBank/DDBJ databases.

-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,

ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A

MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota, Metagoa; Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR IB PRECURSOR (IGF-IB) (SOMATOMEDIN C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INSULIN-LIKE GROWTH FACTOR I. BFCC0D11E32AB75D CRC64;
                                                                                                                -i- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-i- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY
-MEL; M37484; AAA52789.1;
-KSPP; P01343; 1GF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (BY SIMILARITY).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                139 AA.
                                                                                                                                                                                                                                Interpro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRODOD; PD001048; INSULINB.
PRODOM; PD001048; INSULINB.
SMART; SM00078; IIGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Interpro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          77.2%; Score 465; 98.8%; Pred. No. 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-MAY-1997 (TrEMBLrel. 03, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93 CAPLKPAKSARSVRAQRHTDMPKTQK 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE=LIVER;
MEDLINE=97013467; Pubmed=8860303;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE 137 AA; 15177 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; U28070; AAA68952.1; -. EMBL; U85271; AAB47484.1; -. HSSP; P01343; 1GF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 1-122 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       85; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Equus caballus (Horse).
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137
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us-09-852-261-6.rspt

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GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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                                                                                                                                                                               127 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL, DO0688, BAA00604.1, -...
HSSP, P01343; 1GF1.
Interpro; 1PR000799; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; InSULINA.
PROSITE; PS00262; INSULINI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POTENTIAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE=91103966; Pubmed=1368571;
                                                                                                                                                                                                                                                                                                                                            PARTIAL SEQUENCE FROM N.A.
MEDLINE-87222423; PubMed-3034909;
                                                                           61 CAPLKPAKAARSVRAQRHTDMPKTQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         81; Conservative
                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10118;
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P97899
ID P978
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093380
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lien S., Karlsen A., Klemetsdal G., Vage D.I., Olsaker I., Klungland H., Aasland M., Heringstad B., Ruane J., Gomez-Raya L.;
"A primary screen of the bovine genome for quantitative trait loci affecting twinning rate.";
Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY)
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
EMBL; AF210385; AAF72409.1;
EMBL; AF210385; AAF72409.1;
DOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bos taurus (Bovine).
Sukaryota: Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos
                                                                                                                                                                                                                                                                                                                                                                         1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                              12;
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                                                                                                                                                                                                                                                                                                                Length 139;
                                                                                                     BY SIMILARITY.
INSULIN-LIKE GROWTH FACTOR IB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 133;
                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 76.4%; Score 460; DB 6; Length 13
Best Local Similarity 97.7%; Pred. No. 2.2e-48;
Matches 84; Conservative 1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE 133 AA; 14674 MW; A6991DBCB75C103B CRC64;
                                                                                                                                                                                                                                                                                   15612 MW; CDC0E8F19C261A2C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                    61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRK 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                       109 CAPLKPAKSARSVR------YQPPSTNKKTKLQRRRK 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-077-2000 (TrEMBLrel. 15, Created)
01-077-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I (FRAGMENT).
                                                                                                                                                                                                                                                                                                 Score 462; DB 6; Le:
Pred. No. 1.3e-48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           133 AA
                                                                                                                                                                                                                          SIMILARITY.
                                                                                                                                                                                                                                       SIMILARITY.
SIMILARITY.
                                                                                                                                                                                                                                                                                                                                            1; Mismatches
          PRINTS; PRO0277; INSULINB.
PRODOM; PRO01048; Insulin_IGF_relaxin; 1.
SMART; SMO0708; IIGF; I.
PROSITE; PS00262; INSULIN; UNKNOWN_1.
Insulin family; Growth factor; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PRO0276; INSULINA.
PRINTS; PRO0277; INSULINB.
PRODOM; PRO01048; Insulin_IGF_relaxin; 1.
SMART; SM00078; I1GF; 1.
PROSITE; PS00262; INSULIN; 1.
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InterPro; IPR000739; Insulin_IGF_relaxin.
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BY
BY
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                                                                                                                                                                                                                                                                                                               76.7%;
85.4%;
PRINTS; PR00276; INSULINA
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Matches 88; Conservative
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100
139
                                                                                                                                                                                                                                                                                 139 AA;
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SEQUENCE
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Kato H., Okoshi A., Miura Y., Noguchi T.;
"A new cDNA clone relating to larger molecular species of rat insulin-
like growth factor-I mRNA.";
Agric. Biol. Chem. 54-1599-1601(1990).
-: SUBCELLOLAR LOCATION: SECRETED (BY SIMILARITY).
-: SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus sp.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostom1;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
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9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                    29 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Meleagris gallopavo (Common turkey).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Shimatsu A., Rotwein P.; "Mosaic evolution of the insulin-like growth factors."; J. Biol. Chem. 262:7894-7900(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHAIN 23 92 POTENTIAL.
SEQUENCE 127 AA; 14106 MW; 104E126BCFCA5CB7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-NOV-1998 (TrEMBLrel. 08, Created)
01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAY-1997 (TrEMBLrel. 03, Created)
01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I.
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PROSITE; PS00262; INSULIN; 1.
   SMART; SM00078; ILGF; 1.
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SEQUENCE
                         SEQUENCE
                                                 Query Match
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                                                                      Matches
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Q91475
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Q9IBI0
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                                                                                                                                                                                                                                                                                                                                     Archosauria; Aves; Neognathae; Galliformes; Meleagrididae; Meleagris.
NCBL_TaxID=9103;
                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                         1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oncorhynchus tschawytscha (Chinook salmon) (King salmon).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EDUENCE FROM N.A.
SEQUENCE FROM N.A.
STRAIN-BIG QUALICUM RIVER, B.C.; TISSUE-LIVER;
MEDLINE-93247592; PubMed-7683374;
Wallis A.E., Devlin R.H.;
"Duplicate insulin-like growth factor-I genes in salmon display
                                                                                                                                                                                                                                                                                                     ;
                                                                                                                                                                                                                                                                               Length 153;
                                                                                                                                                                                                                                                      i, Score 419; DB 13; Lengu...
No. 2:66-43; Indels
6; Indels
                                           STRAIN-BIG 6 ML TOM; TISSUE-LIVER;

CZervinski S.M., Ashwell C.M., McMurtry J.P.;

"Cloning of turkey insulin-like growth factor-I (IGF-I).";

Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

EMBL; AF074980; AACZ6006.1; --
HSSP; P01343; IGF1.
                                                                                                                                                                                                                                            49 118 INSULIN-LIKE GROWTH FACTOR-I.
153 AA; 17295 MW; 5AF1E5BBD13C70B5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (OCT-1994) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   [2]
SEQUENCE FROM N.A.
STRAIN-BIG QUALICUM RIVER, B.C.; TISSUE-LIVER;
                                                                                                                                                                                                                                                                     69.6%; Score ... 88.4%; Pred. No. 2.6e--
                                                                                                                                                                                                                                                                                                                                                                                                                                                      161 AA
                                                                                                                                                Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
PRIOPOM; PR001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IlGF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; U15961; AAA67267.1;
HSSP; P01343; 1GF1.
HTGEPTO; PR000779; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PD001048; Insulin_IGF_relaxin; 1.
                                                                                                                                                                                                                                 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                   61 CAPLKPAKAARSVRAORHTDMPKTOK 86
|||:|| |:|| |:||||||||||| ||
109 CAPIKPPKSARSVRAORHTDMPKAOK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INSULIN-LIKE GROWTH FACTOR-I.
                                                                                                                                                                                                                                                                                       Local Similarity 88.48 les 76; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                48
118
                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                              Query Match
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Q91230;
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                                                                                                                                                                                                                       Signal
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Matches
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                                                                                                                                                                                                              Liang Y.H., Cheng C.H., Chan K.M.;

"Insulin-like growth factor IE22 is the predominantly expressed form of IGF in common carp (Cyprinus carpio).";

"Insulin-like growth factor IE21 is the predominantly expressed form of IGF in common carp (Cyprinus carpio).";

"Insulin-like growth factor IE21 is 145-153(1996).

"Insulin-like IOCATION: SECRETED (BY SIMILARITY).

"INSULIN-IGF/RELAXIN FAMILY.

"INSULIN-IGF/RELAXIN FAMILY.

HSSP; P01343; IGF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62 GPETLCGAELVDTLQFVCGDRGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 121
                                                                                                                        Gaps
                                                                                                                                                                            1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cyprinus carpio (Common carp).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi;

Cypriniformes; Cyprinidae; Cyprinios.

NCBI_TaxID=7962;
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                                                                                                                                                                                                                                                                                              61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTN----KKMKSQRRKKGST 106
                                                       Length 161;
                                                                                                                                                                                                                                                                                                                             Length 178;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPP----STNKKMKSQRRKKGST 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
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161 AA; 17763 MW; A5A85D121377BF67 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 178 AA; 19687 MW; 7075A34FF379C459 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-0CT-2000 (TrEMBLrel. 15, Created)
01-0CT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I SUBTYPE EA2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I PRECURSOR (FRAGMENT).
Salmo salar (Atlantic salmon).
                                                                                                                        15;
                                                       67.1%; Score 404; DB 13; 69.4%; Pred. No. 1.9e-41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
66.9%; Score 403; DB 13;
Best Local Similarity 68.2%; Pred. No. 2.8e-41;
Matches 75; Conservative 12; Mismatches 19;
                                                                                      Local Similarity 69.4%; Pred. No. 1.9e-
nes 77; Conservative 13; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
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MEDLINE-96241923; PubMed-8680527;
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Devlin R.H.;
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NON_TER
SIGNAL
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091965;
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Q91965
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                                                                                                                                                                                                                                                                                                                                                                                                                  19 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 78
                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                    1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                             Duguay S.J., Park L.K., Samadpour M., Dickhoff W.W.;
"Nucleotide sequence and tissue distribution of three insulin-like
growth factor I prohormones in salmon.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Duguay S.J, Park L.K., Samadpour M., Dickhoff W.W.;
"Nucleotide sequence and tissue distribution of three insulin-like
growth factor I prohormones in salmon.";
Mol. Endocrinol. 6:1202-1210(1992).
-i- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19) Last sequence update)
01-DEC-2001 (TrEMBLrel. 19) Last annotation update)
1NSULIN-LIKE GROWTH FATOR I PRECURSOR (FRAGMENT).
00corhynchus kisutch (Coho salmon).
Eukaryota: Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygiis Salmoniformes; Salmonidae; Oncorhynchus.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostel; Euteleostel;
Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
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                                                                                                                                                                                                                                                                                                                                                     Score 402; DB 13; Length 145;
Pred. No. 2.9e-41;
9; Mismatches 18; Indels
                                                                                                                                                                                                                                                                                                          INSULIN-LIKE GROWTH FACTOR I.
                                                                                                                           Mol. Endocrinol. 6:1202-1210(1992).
-1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                3D94EDF477268FC4 CRC64;
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                                                                                                                                                                                    InterPro; IPR000739; Insulin_IGF_relaxin.
Pram; PR00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                              POTENTIAL
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                                                        SEQUENCE FROM N.A.
TISSUE-LIVER;
MEDLINE-93024477; PubMed-1406698;
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18
>88
145
15885 MW;
                                                                                                                                                                                                                                                                                                                                                                   73.38;
                                                                                                                                                                EMBL; M81904; AAA18211.1;
HSSP; P01343; 1GF1.
                                                                                                                                                                                                                                                                                                                                                                  Local Similarity 73.3
nes 74; Conservative
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                                                                                                                                                                                                                                                                                                                              145 AA;
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SEQUENCE
                                                                                                                                                                                                                                                                       Signal.
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Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFGSCELRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Metazoa; Chordata, Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus. NCBL_TaxID=74940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Wallis A.E., Devlin R.H.; "Duplicate insulin-like growth factor-I genes in salmon display alternative splicing pathways."; Mol. Endocrinol. 7:409-422(1993).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 155;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (SEP-1994) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Oncorhynchus tschawytscha (Chinook salmon) (King salmon)
                                                                                                                                                                                                                                                                                                                                       INSULIN-LIKE GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (OCT-1994) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                       155 AA; 16968 MW; 022FD3CA39CA3160 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR-I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 CAPLKPAKAARSVRAQRHIDMPKTQKYQPPSINKKMKSQRR 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 402; DB 13;
                                                                                                                                                                                                                                                                                                                                                                     R -> X (IN REF. 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 3.1e-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        188 AA
                                                                     InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRODOM; PR00176; INSULINB.
PRODOM; PD001048; INSULINB.
SMART; SM00078; IIGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ProDom; PD001048; Insulin_IGF_relaxin; 1.
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Pfan, PF00049; Insulin.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
                                                                                                                                                                                                                                                                                                                   POTENTIAL.
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                                                                                                                                                                                                                                   PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               66.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          73.38;
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                      EMBL; M81913; AAA49413.1;
HSSP; P01343; 1GF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   74; Conservative
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                                                                                                                                                                                                                                                                                          1
18
>88
73
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45 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 104
                                                                                                                                                                                                                                                                                                                                                                                          Devlin R.H.;
                                                                                                              091231
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PLASMA,
HAVE A
                                                                                                                                                                                                                                                                                                                                                                                                           Kavsan V.M., Grebenjuk V.A., Koval A.P., Skorokhod A.S., Roberts C.T. Jr., Leroith D.; "Isolation of a second nonallelic insulin-like growth factor I gene
                                                                                                                                                                                                                                                                                                                            Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Actinopterygii, Neopterygii, Teleostei, Euteleostei, Protacanthopterygii, Salmoniformes, Salmonidae, Oncorhynchus.
                                                                                                                                                                                                                                                            ol-aug-1998 (TrEMBLrel. 07, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I.1 PRECURSOR (IGF-I.1) (SOMATOMEDIN).
IGF-I.1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULN; 1.
Insulin family; Growth factor; Plasma; Multigene family; Signal.
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0
                                                                                                                                                                                                                                                                                                                                                                                                                                              from the salmon genome.";

DNA CELL BIOL. 13:555-559(1994).

-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT WUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-!- SUBCELLULAR LOCATION: SECREFED.

-!- SUBLILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

EMBL, AF063216; AAC18833.1;
                                                  Length 188;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 188;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INSULIN-LIKE GROWTH FACTOR I.1
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BY SIMILARITY.
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BY SIMILARITY.
BY SIMILARITY.
W, F4CEB6D05E0F24B8 CRC64;
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
SEQUENCE 188 AA; 20782 MW; F4D705BA811024B8 CRC64;
                                                                                                                                                           61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRR 101
                                                Score 402; DB 13;
Pred. No. 3.9e-41;
9; Mismatches 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                66.8%; Score 402; DB 13; 73.3%; Pred. No. 3.9e-41; iive 9; Mismatches 18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HSSP; P01343; 1GF1.
InterPro; IPR000739; Insulin_IGF_relaxin.
                                                                                                                                                                                                                                                    01-AUG-1998 (TrEMBLrel. 07, Created)
01-AUG-1998 (TrEMBLrel. 07, Last seq
01-DEC-2001 (TrEMBLrel. 19, Last anno
                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                             [1]
SEQUENCE FROM N.A.
MEDLINE=94296559; Pubmed=8024699;
                                                                                                                                                                                                                                                                                                               Oncorhynchus keta (Chum salmon).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ΒX
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                                               Match 66.8%;
Local Similarity 73.3%;
les 74; Conservative
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Best Local Similarity
Matches 74; Conserv
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P81268
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45 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 104
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                           Oncorhynchus tschawytscha (Chinook salmon) (King salmon).
Mekaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
NCBI_TaxID=74940;
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 10), Last annotation update)
10-DEC-2001 (TrEMBLrel. 10), Last annotation update)
1NSULIN-LIKE GROWTH FACTOR I PREUNSOR (FRAGMENT).
0ncorhynchus kisutch (Coho salmon).
Actinoterygis Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinoterygis; Neopterygis; Teleostel; Euteleostei; Protacanthopterygis; Salmoniformes; Salmonidae; Oncorhynchus.
NCBI_TAXID-8019;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
STRAIN-BIG QUALICUM RIVER, B.C.; TISSUE-LIVER;
MEDLINE-93447592; PubMed-7683374;
Wallis A.E., Devlin R.H.;
"Duplicate insulin-like growth factor-I genes in salmon display alternative splicing pathways.";
Mol. Endocrinol. 7:409-422(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (OCT-1994) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             105 CAPVKSGKAARSVRAQRHTDMPRT----PKEVHQKNSSRGNTGGRNY 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 CAPLKPAKAARSVRAQRHTDMPKTQKYQPPSTNKKMKSQRRRKGSTF 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9AC8F072762D2AA0 CRC64;
                                                                                                                                                                                                                                                                                  01-NOV-1996 (TrEMBLrel. 01, Last sequence update) 01-DEC-2001 (TrEMBLrel. 19, Last annotation update) INSULIN-LIKE GROWTH FACTOR-I.
66.1%; Score 398; DB 13; I
69.2%; Pred. No. 9.2e-41;
iive 11; Mismatches 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
STRAIN-BIG QUALICUM RIVER, B.C.; TISSUE-LIVER;
                                                                                                                                                                                                   149 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Interpro; IPR000739; Insulin_IGF_relaxin.
Pfan; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
PRODOm; PD001048; Insulin_IGF_relaxin; 1.
SMART; SMORTS; INSULINB.
PROSITE: PS00262; INSULIN; 1.
SEQUENCE: 149 AA; 16507 MW; 9AC8F072762D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                116 AA
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Best Local Similarity 69.2%
Matches 74; Conservative
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HSSP; P01343; 1GF1.
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1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60

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MEDISME-90190659; PubMed=2628735;
Cao O.P. Duguay S.J. Plisetskaya E., Steiner D.F., Chan S.J.;
Nucleotide sequence and growth hormone regulated expression of salmon insulin-like growth factor I mRNA.";
Mol. Endocrinol. 3:2005-2010(1989).";
                                                                                                                                                                                                                                                                                                                                                                                             Query Match 65.8%; Score 396; DB 13; Length 116; Best Local Similarity 70.8%; Pred. No. 1.2e-40; Matches 75; Conservative 11; Mismatches 12; Indels
                                                                                                                                                                                                                                                                                                                                     POTENTIAL.
INSULIN-LIKE GROWTH FACTOR I.
                                                                                                                                                                                                                                                                                                                                  <1 18 POTENTIAL.
19 >88 INSULIN-LIKE GROWTH FACTOI
116 116
116 AA; 12697 MW; C5F378915179D89D CRC64;
                                                                                                                                                                                                                                                                                                   PROSITE; PS00262; INSULIN; 1.
                                                                                            SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
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SEQUENCE
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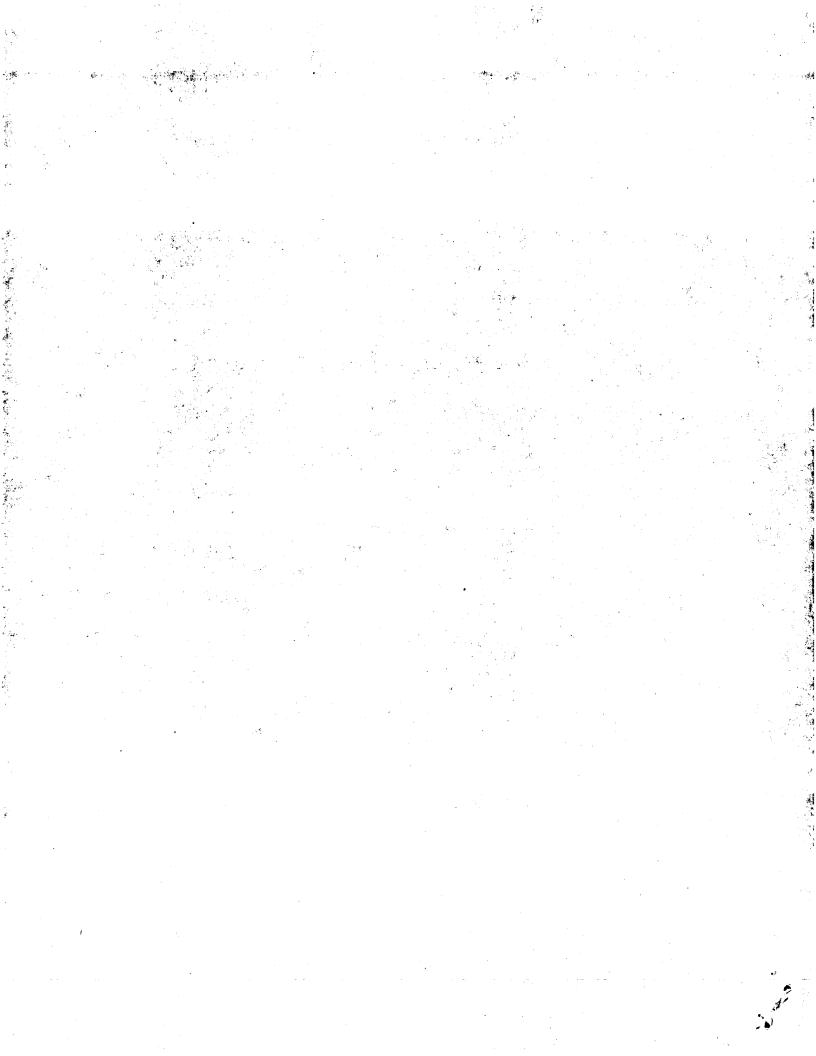
redrch completed: October 25, 2002, 15:58:45 Job time: 20.7289 secs

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5.1.3	Compug	
GenCore version 5.1.3	- 2002	
GenCore	(c) 1993 - 2002	
	Copyright	

OM protein - protein search, using sw model

October 25, 2002, 15:55:02; Search time 12.7048 Seconds (without alignments) 839.517 Million cell updates/sec Run on:

US-09-852-261-6

602 1 GPETLCGAELVDALQFVCGD.....TNKKMKSQRRRKGSTFEEHK 111 Title: Perfect score:

Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 rched:

Scoring table:

283138 segs, 96089334 residues

283138 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR_71:*
1: pir1:*
2: pir2:*
3: pir3:*
1: pir4:*

Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

STIMMARTES

	Description	insulin-like growt	-like	in-lïke	in-like	insulin-like growt	insulin-like growt	-like	n-like	-like	insulin-like growt	insulin-like growt	insulin-like growt	in-1	n-like	insulin-like growt	insulin-like growt	in-like	∹	ᅻ	7	insulin-like growt	insulin-like growt	in-like	insulin-like growt	insulin-like growt	insulin-like growt	in-1	insulin-like growt	insulin-like growt
SUMMARIES	OI.	A26859	IGHU1B	A40912	A27804	IGGP1	A36552	IGHU1	PN0622	IGB01	S12825	JC2483	S22878	A33390	A25540	B27804	B40912	A41399	A36079	C54270	C44012	A41396	A54270	B54270	D54270	-	S66485	369	B46244	T10897
	DB	. ~	٦	7	7	П	7	П	7	٦	7	7	~	7	7	7	~	7	7	7	7	7	~	7	~	7	7	7	7	7
	Length	159	195	133	181	137	137	. 153	122	153	153	154	138	154	127	153	127	153	153	161	155	176	188	188	149	176	126	193	214	187
оP	Query Match	89.5	89.0	86.5	4	7	7.	77.2	76.4	76.4	76.4	75.7	75.1	S.				9.69	68.5	67.1	9.99	99	66.8	9.99	66.1	66.1	50.1	49.5	45.2	40.9
	Score	539	536	521	508	465	465	465	460	460	460	456	452	452	450	447	429	419	412.5	404	402	402	402	402	398	398	301.5	298		246.5
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S04858 IGB02	IGHU2 I57671 A38612	B60738 A24913	S02423 I53642	IGRT2 I67610	I51240 S66484	A60740 A34049	INFIS
77.	H 77 77	77	0 0	7	0 0	77	7
179	180 128 139	181 180	183 93	180 183	79 210	66 44	20
39.2	38.5 38.4 38.0	38.0	37.6	37.3	35.5	32.7 29.1	26.5
242	232 231 229	229	226.5 225	224.5 220.5	213.5	197 175	159.5
30	3 3 3 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	35 36	37 38	39 40	41	443	45

ALIGNMENTS

16-Jul-1999	differing within the	PIDN:CAA29480.1; PID	0; Gaps 0;
RESULT 1 A26659 insulin-like growth factor IB precursor - rat C;Species: Rattus norvegicus (Norway rat) C;Date: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change 16-Jul-1999	C;Accession: A26859 R;Shimatsu, A.; Rotwein, P. Nucleic Acids Res. 15, 7196, 1987 A;Title: Sequence of two rat insulin-like growth factor I mRNAs differing within the A;Reference number: A26859; MUID:88015572 A;Accession: A26859	A; Molecule type: mRNA A; Residues: 1-159 <shix) A; Cross-references: GB:X06107; GB:M32260; GB:Y00429; NID:g56424; PIDN:CAA29480.1; PID C; Superfamily: insulin C; Keywords: alternative splicing; growth factor</shix) 	Query Match 89.5%; Score 539; DB 2; Length 159; Best Local Similarity 90.1%; Pred. No. 2.2e-48; Matches 100; Conservative 3; Mismatches 8; Indels 0; Gaps

٥y	1 GF	. GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
	=	
q a	49 GE	49 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108

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109 RESULT 2 Db

Januarian Like growth factor I precursor, splice form B [validated] - human N.Alternate names: IGF-IB; somatomedin C
N.Alternate names: IGF-IB; somatomedin C
N.Alternate names: IGF-IB; somatomedin C
N.Contains: insulin-like growth factor IB-E1 amide
C.Species: Homo sapiens (man)
C.Date: 30-Jun-1987 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000
C.Accession: A01611, A36181; S30540; B48960; A4264
R.Rotwein, P.: Pollock, K.M.; Didler, D.K.; Krivi, G.G.
J. Biol. Chem. 261, 4828-4832, 1986
A.Title: Organization and sequence of the human insulin-like growth factor I gene. Al A.Reference number: A92581; MUID:86168194
A.Reference number: A92581; MUID:86168194
A.Residues: 1-195 <ROTI>
A.Residues: 1-195 <ROTI>
B.R.Rotwein, P.
B.Rotwein, P.
B.R.Rotwein, P.
B.Rotwein, P.
B.R.Rotwein, P.
B.R.Rotwein,

Proc. Natl. Acad. Sci. U.S.A. 83, 77-81, 1986.
A;Title: Two insulin-like growth factor I messenger RNAs are expressed in human liver A;Tetle: Two insulin-like growth factor I messenger RNAs are expressed in human liver A;Refcerence number: A26181; MUID:86094355
A;Accession: A36181
A;Molecule type: mRNA

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insulin-like growth factor I precursor - rat
C.Species: Rattus norvegicus (Norway rat)
C.Species: 09-Jun-1988 #sequence_revision 09-Jun-1988 #text_change 16-Jul-1999
C.Accession: A27804; 165202
R.Shimatsu, A., Rotwein, P.
J. Biol. Chem. 262, 7894-7900, 1987
A:Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence, A.Reference number: A27804; MUID:87222423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A.Status: preliminary
A.Molecule type: DNA
A.Molecule type: DNA
A.Residues: 1-181 (SH1)
A.Cross references: GB:M15650; GB:J02743; NID:g204296; PIDN:AAA41214.1; PID:g204299
B.Roberts, C.T.
Blochem. Blochpiys. Res. Commun. 146, 1154-1159, 1987
A.Title: Rat IGF-I cDNA's contain multiple 5'-untranslated regions.
A.Reference number: 152218; MUID:8729853
A.Reference number: 152218; MUID:8729853
A.Status: preliminary; translated from GB/EMBL/DDBJ
A.Molecule type: mRNA
A.Residues: 1-27 (RES)
A.Rossicules: 1-27 (RES)
A.Rossicules: 1-27 (RES)
C.Superfamily: insulin
C.Superfamily: insulin
C.Superfamily: alternative splicing
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C;Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 07-Nov-1997
C;Accession: S12719
R;Bell, G.I.: Stempien, M.M.; Fong, N.M.; Seino, S.
Nucleic Acids Res. 18, 4275, 1990
A;Title: Sequence of a cDNA encoding guinea pig IGF-I.
A;Reference number: S12719; MUID:90332447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   49 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                     23 GPETLCGAELVDALQFVCGPRGFYFNRPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 82
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                                          PIDN: AAA41385.1; PID: g204750
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                                                                                                                                                                                                                                                                                                                                                                                                                 Length 181;
                                                                                                                                              Length 133;
                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 508; DB 2; Len
Pred. No. 3.9e-45;
                                                                                                                                              Score 521; DB 2; L
Pred. No. 1.3e-46;
3; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             insulin-like growth factor I precursor - guinea pig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4; Mismatches
       A;Residues: 1-133 <ROB>
A;Cross-references: GB:M15480; NID:g204749;
C;Superfamily: insulin
                                                                                                                                          Query Match 86.5%;
Best Local Similarity 87.4%;
Matches 97; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        84.4%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
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A; Residues: 1-195 <SA2>
A; Residues: 1-195 <SA2
A; Residues: 1-195 <A2
A; Note: sequence modified after extraction from NCBI backbone
A; Note: sequence modified after extraction from NCBI backbone
A; Note: sequence extracted from NCBI backbone (NCBIN:13058)
A; Note: sequence extracted from NCBI backbone (NCBIN:13058)
Siegfried, J.M.; Kasprzyk, P.G.; Treston, A.M.; Mulshine, J.L.; Quinn, K.A.; Cuttitta, Siegfried, J.M.; Rasprzyk, P.G.; Treston, A.M.; Mulshine, J.L.; Quinn, K.A.; Cuttitta, A; Reference number: A42664; MUID:92390398
A; Contents: annotation; IBE-1; amidated carboxyl end
C; Comment: For an alternative splice form, see PIR:IGHUI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        91
                                                                                                                                                                                                                                                                                                                        A; Reference number: A48960; MUID:93265440
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C; Superfamily: insulin
C; Keywords: alternative splicing; amidated carboxyl end; growth factor; plasma
C; Keywords: alternative splicing; amidated carboxyl end; growth factor; plasma
C; Keywords: alternative splicing speaked <SIG>
F; 1-21/Domain: signal sequence #status predicted <SIG>
F; 2-48/Domain: propeptide #status predicted <CRB>
F; 49-118/Product: Insulin chain B-like #status predicted <CRB>
F; 49-77/Domain: insulin connecting C peptide-like #status predicted <CRC>
F; 90-110/Domain: insulin chain A-like #status predicted <CRA>
F; 111-118/Domain: alternian propeptide (E peptide) #status predicted <CRE>
F; 111-118/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <MA2>
F; 151-172/Product: insulin-like growth factor IB-El amide #status predicted <MA2>
F; 54-96, 66-109, 95-100/Disulfide bonds: #status predicted
F; 172/Modified site: amidated carboxyl end (Arg) (amide in mature form from following experience)
                                                                                                                                                                       A; Accession: S30540
A; Roblecule type: manA
A; Residues: 1-195 <SANA
A; Residues: 1-195 <SANA
A; Cross-references: EMBL:X56774; NID:g32991; PIDN:CAA40093.1; PID:g32992
R; Sandberg Voldqvist, A.C.; Stahlbom, P.A.; Reinecke, M.; Collins, V.P.; von Holst,
Cancer Res. 53, 2475-2478, 1993
A; Title: Characterization of insulin-like growth factor 1 in human primary brain tum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
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C;Species: Rattus norvegicus (Norway rat)
C;Date: 28-Feb-1992 #sequence_revision 28-Feb-1992 #text_change 16-Jul-1999
C;Accession: A40912
R;Roberts Jr., C.T.; Lasky, S.R.; Lowe Jr., W.L.; Seaman, W.T.; LeRoith, D. Mol. Endocrinol. 1, 243-248, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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A;Cross-references: GB:M11568; NID:g183111; PIDN:AAA52539.1; PID:g183112 R5.Sandberg Nordqvist, A.C.; Stahlbom, P.A.; Lake, M.; Sara, V.R. submitted to the EMBL Data Library, November 1990 A;Description: Nucleotide sequence of the human fetal brain IGF-1b.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .;
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Pred. No. 5.4e-48;
2; Mismatches 2; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Cross-references: GDB:120081; OMIM:147440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 89.0%;
Best Local Similarity 96.1%;
Matches 98; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Introns: 21/3; 74/1; 134/3
                                                                                                                                          A; Reference number: S30540
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C: Genetics:

A;Molecule type: mRNA A;Residues: 1-137 <BEL> A;Cross-references: EMBL:X52951 A;Note: it is uncertain whether Met-1 or Met-8 is the initiator

c tissues. A;Reference number: A40912; MUID:88288198

g ò g A; Accession: A40912 A; Status: preliminary

us-09-852-261-6.rpr

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A; Note: sequence extracted from NCBI backbone (NCBIN:133056, NCBIP:133057)
A; Note: sequence inconsistent with the nucleotide translation
R;Rall, L.B.; Scott, J. Bell, G.I.
A;Rall, L.B.; Scott, J. 99-248, 1997
A;Title: Human insulin-like growth factor I and II messenger RNA: isolation of comple A; Reference number: 157044; MUID:88065102
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A; Molecule type: mRNA
A; Moledues: 1-153 <NNA
A; Realdues: 1-153 <NNA
A; Cross-references: EMBL.X56773; NID:932989; PIDN:CAA40092.1; PID:932990
B; Sandberg-Nordqvist, A.C.; Stahlbom, P.A.; Reinecke, M.; Collins, V.P.; von Holst, H
Cancer Res. 53, 2475-2478, 1993
A; Title: Characterization of insulin-like growth factor 1 in human primary brain tumo
A; Reference number: A48960; MUID:93265440
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A:Title: Complete characterization of the human IGF-I nucleotide sequence isolated fr
A:Reference number: A23622; MUID:86108910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Note: Met-24 is proposed as a likely initiator
R; Steenbergh, P.H.; Koonen-Reemst, A.M.C.B.; Cleutjens, C.B.J.M.; Sussenbach, J.S.
Biochem. Biochys. Res. Commun. 175, 507-514, 1991
A; Title: Complete nucleotide sequence of the high molecular weight human IGF-I mRNA.
A; Reference number: JT0571; MUID:91207342
                                                                                                    "...... Letelences: GB:X03420; GB:X00362; NID:g33020; PIDN:CAA27152.1; PID:g33021; R.Jansen, M.; van Schaik, F.M.A.; Ricker, A.T.; Bullock, B.; Woods, D.E.; Gabbay, K Nature 306, 609-611, 1983
A;Title: Sequence of cDNA encoding human insulin-like growth factor I precursor. A;Reference number: A93321; MUID:84068210
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A;Cross-references: GB:M29644; NID:g183119; PIDN:AAA52543.1; PID:g183120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Cross-references: EMBL: X57025; NID: 933007; PIDN: CAA40342.1; PID: 933008
                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Molecule type: mRNA
A;Residues: 1-153 <JAN>
A;Cross-references: GB:X00173; NID:g33015; PIDN:CAA24998.1; PID:g33016
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A;Residues: 49-53, 'X',55-65, 'X',67-75 <KAR>
A;Experimental source: platelet lysate
R:Nordqvist Sandberg, A.C.; Stahlbom, P.A.; Lake, M.; Sara, V.R.
submitted to the EMBL Data Library, November 1990
A;Description: Nucleotide sequence of the human fetal brain IGF-la.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RiLe Bouc, Y.; Dreyer, D.; Jaeger, F.; Binoux, M.; Sondermeyer, P. FEBS Lett. 196, 108-112, 1986
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A;Residues: 1-123, E', 125-132, E', 134-153 <SAN>
A;Cross-references: GB:X56773; GB:S61841; NID:932989
A;Experimental source: anaplastic oligodendroglioma
A;Experimental source: anaplastic oligodendroglioma
A;Note: sequence extracted from NCBI backbone (NCBIN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
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A;Residues: 49-118 KRIN>
K;Karey, K.P.; Marquardt, H.; Sirbasku, D.A.
Blood 74, 1084-1092, 1989
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A; Accession: S30519
                                                              A; Molecule type: DNA
A; Residues: 24-153 <DEP>
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A; Residues: 1-153 <STE>
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N;Alternate names: IGF-I long splice form precursor; IGF-IA; somatomedin C
C;Species: Homo.sapians (man)
C;Species: Homo.sapians (man)
C;Date: 24-Apr-1984 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000
C;Accession: A92581; A23614; A93321; JT0571; A23622; A92226; A60483; S30519; A48960; I57
R;Rotwein, P.; Pollock, K.M.; Didier, D.K.; Krivi, G.G.
J. Biol. Chem. 261, 4828-4832, 1986
A;Title: Organization and sequence of the human insulin-like growth factor I gene. Alter
A;Reference number: A92581; MUID:86168194
A;Molecule type: DNA
A;Residues: 1-153 <ROT>
A;Cross-references: GB:M14156; NID:g183107; PIDN:AAA52538.1; PID:g183110
R;de Pagter Holthuizen, P.; van Schalk, F.M.A.; Verduijn, G.M.; van Ommen, G.J.B.; Bouma FEBS Lett. 195, 179-184, 1986
A;Title: Organization of the human genes for insulin-like growth factors I and II.
A;Reference number: A91356; MUID:86108862
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C; Superfamily: insulin
C; Keywords: glycoprotein; growth factor; plasma
C; Keywords: glycoprotein; growth factor; plasma
F;1-32/Domain: signal sequence #status predicted <SIG>
F;33-102/Product: insulin-like growth factor I #status predicted <MAT>
F;33-61/Domain: insulin connecting C peptide-like #status predicted <CHE>
F;62-73/Domain: insulin connecting C peptide-like #status predicted <CHC>
F;74-94/Domain: D peptide #status predicted <CHD>
F;95-102/Domain: D peptide #status predicted <CHD>
F;95-102/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CHE>
F;124/Binding site: carbohydrate (Asn) (covalent) #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cipate: 12-Apr-1991 #sequence_revision 12-Apr-1991 #text_change 16-Jul-19 Richards 12-Apr-1991 #sequence_revision 19-Apr-1992 #serion 1990 Airile: A novel human insulin-11ke growth factor I messenger RNA is expra Airile: A novel human insulin-11ke growth factor I messenger RNA is expra Airile: A novel human insulin-11ke growth factor I messenger RNA is expra Airile: A novel human insulin-11ke growth factor I messenger RNA is expra Airile: A novel human insulin-11ke growth factor I messenger RNA is expra Airile: A novel human insulin-11ke growth factor I messenger RNA is expra Airile: A novel human insulin-11ke growth factor I messenger RNA is expra Airile: A novel human insulin-11ke growth factor I messenger RNA is expra Airile: A novel human insulin-11ke growth factor I messenger RNA is expra Airile: A novel human insulin-11ke growth factor I messenger RNA is expra Airile: A novel human insulin-11ke growth factor I messenger RNA is expra Airile: A novel human insulin-11ke growth factor I messenger RNA is expra Airile: A novel human insulin-11ke growth factor I messenger RNA is expra Airile: A novel human insulin-11ke growth factor I messenger RNA is expra Airile: A novel human insulin-11ke growth factor I messenger RNA is expression and a novel human insulin-11ke growth factor I messenger RNA is expression and a novel human insulin-11ke growth factor I messenger RNA is expression and a novel human insulin-11ke growth factor I messenger RNA is expression and a novel human insulin-11ke growth factor I messenger RNA is expression and a novel human insulin-11ke growth factor I messenger RNA is expression and a novel human insulin-11ke growth factor I messenger RNA is expression and a novel human insulin-11ke growth factor I novel human insulin-11ke growth factor I novel human insulin-11ke growth 
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Pred. No. 8.2e-41;
1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 8.2e-41;
1; Mismatches 0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 465;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   77.2%;
98.8%;
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98.8%;
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les 85; Conserv
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us-09-852-261-6.rpr

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A; Accession: billor.

A; Accession: billor.

A; Residues: 1.153 < FODY.

A; Cross-references: EMBL:X15726; NID:9454; PIDN:CAA33746.1; PID:9455

A; Cross-references: EMBL:X15726; NID:9454; PIDN:CAA33746.1; PID:9455

A; Experimental source: liver

B; Honoger, A; Humbel, R.E.

J. Biol. Chem. 261, 559-575, 1986

A; Title: Insulin-like growth factors I and II in fetal and adult bovine serum. Purifil A; Recession: A25623

A; Molecule type: protein

A; Reference number: A9585; MUD:8608581

A; Molecule type: protein

A; Residues: 49-118

A; Molecule type: protein

A; Recision: S00465

A; Mill: Insulin-like growth factors I and 2 in bovine colostrum. Sequences and biolo

A; Reference number: S00465; MUD:88268820

A; Release: 49-118

A; Recision: S00465

A; Rocession: S0046-100,465

A; Rocession: S00465

A; Roce
                                    A;Title: Nucleotide sequence of the bovine insulin-like growth factor 1 (IGF-1) and i A;Reference number: S12672; MUID:90175014
A;Accession: S12672
           1990
           Nucleic Acids Res. 18, 676,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
les 84; Conserv
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A: Title: Sequence of a cDNA encoding dog insulin-like growth factor I.
A: Reference number: PN0622; MUID: 93366192
A: Accession: PN0622
A: Molecule type: mRNA
A: Residues: 1-122 < CDEL>
C: Comment: This protein is a potent inducer of DNA synthesis in multiple cell types, act
C;Comment: The insulin-like growth factors, isolated from plasma, are structurally and C;Comment: For an alternative splice form, see PIR:IGHUIB.
                                                                                                                             A;Cross-references: GDB:120081; OMIM:147440
A;Cross-references: GDB:120081; OMIM:147440
A;Cross-references: 1242-12424.1
A;Introns: 21/3; 74/1; 134/3
C;Superfamily: insulin
C;Superfamily: insulin
C;Superfamily: insulin
C;Superfamily: insulin
C;Superfamily: propeptide #status predicted cSTO>
F:1-21/Domain: propeptide #status predicted cPRO>
F:49-118/Pomain: insulin chain B-11ke #status experimental cAHD>
F:49-17/Domain: insulin chain A-11ke #status experimental cCHC>
F:90-110/Domain: insulin chain A-11ke #status experimental cCHC>
F:10-110/Domain: Dpeptide #status experimental cCHC>
F:111-118/Domain: arboxyl-terminal propeptide (E peptide) #status predicted cCPRO>
F:54-96,66-109,95-100/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              predicted .<MAT>
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C;Species: Canis lupus familiaris (dog)
C;Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 07-May-1999
C;Accession: PN0622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N;Alternate names: IGF-I; somatomedin C
C;Species: Bos primigenius taurus (cattle)
C;Date: 31-Mar-1988 #sequence_revision 28-Apr-1995 #text_change 18-Jun-1999
C;Accession: S12672; A25623; S00465
R;Fotsis, T.; Murphy, C.; Gannon, F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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C;Superfamily: insulin
C;Keywords: growth factor
20-89/Product: insulin-like growth factor Ia (fragment) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 465; DB 1; Length 153;
Pred. No. 9.1e-41;
1; Mismatches 0; Indels
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0; Indels
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Pred. No. 2.4e-40;
1; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ch 77.2%;
1 Similarity 98.8%;
85; Conservative
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97.78;
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Matches 84; Conserv
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                                                                                                          A; Gene: GDB: IGF1
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                                                                         C; Genetics:
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N.Alternate names: conatomeding (Species: Sus scrofa domestic pig)
C; Species: Sus scrofa domestica (domestic pig)
C; Species: Sus scrofa domestica (domestic pig)
C; Species: Sus scrofa domestica (domestic pig)
C; Accession: S12825; S21488; A60738
R; Muclair Acids Res. 18, 364, 1990
Nucleic Acids Res. 18, 364, 1990
A; Title: Nucleotide sequence of porcine insulin-like growth factor I: 5' untranslated A; Reference number: S12825
A; Accession: S12825
A; Accession: S12825
A; Accession: S12825
A; Residues: preliminary
A; Molecule type: DNA
A; Molec
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                                                                                                                                                                                                                                                                                                                                                         49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                               Gaps
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                                                                                                                                                                                                                                                                                 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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A;Residues: 1-21 <DIC>
A;Cross-references: EMBL:X17638; NID:91995; PIDN:CAA35632.1; PID:91996
                                                                                                                                               ó;
              DB 1; Length 153;
76.4%; Score 460; DB 1;
llarity 97.7%; Pred. No. 3e-40;
Conservative 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      insulin-like growth factor I precursor - pig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    109 CAPLKPAKSARSVRAQRHTDMPKAQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
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Genetics:

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A) Residues: 1-43, 785', 46-154 <WON>
A) Residues: 1-53', 785', 46-154 <WON>
A) Cross-references: GB:M30653; NID:g165929; PIDN:AAA80532.1; PID:g165930
B;Hey, A.W.; Browne, C.A.; Simpson, R.J.; Thorburn, G.D.
Biochim. Biochim. Biophys: Acta 997, 27-35, 1989
A;Title: Simultaneous isolation of insulin-like growth factors I and II from adult sh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             insulin-like growth factor I precursor, splice form 1 - sheep
N.Alternate names: somatomedin C
C; Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C; Date: 199-Mar-1990 #sequence_revision 27-Feb-1997 #text_change 23-Jul-1999
C; Accession: S22877; A33390; S07965; S07198
R; Dickson, M.C.; Saunders, J.C.; Gilmour, R.S.
J. Mol. Endocrinol. 6, 17-31, 1991
A; Title: The ovine insulin-like growth factor-I gene: characterization, expression an A; Reference number: S22877; MUID: 91197361
        insulin-like growth factor I precursor, splice form 2 - sheep
C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C;Date: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 23-Jul-1999
C;Accession: 522878; $07198
R;Dickson, M.C.; Saunders, J.C.; Gilmour, R.S.
J. Mol. Endocrinol. 6, 17-31, 1991
A;Title: The ovine insulin-like growth factor-I gene: characterization, expression an A;Reference number: $22877; MUID:91197361
A;Accession: $22878
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Wolecule type: DNA
A; Residues: 1-138 < DIC.
A; Cross-references: EMBL.
A; Cross-references: EMBL.
K; Francis, G.L.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.
Endocrinology 124, 1173-1183, 1989
A; Title: Sheep insulin-like growth factors I and II: sequences, activities and assays
A; Reference number: S07198; MUID:89136887
A; Accession: S07198
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C) Superfamily: insulin

C; Reywords: alternative splicing; growth factor; plasma

C; Reywords: alternative splicing; growth factor; plasma

C; Reywords: alternative splicing; growth factor

E; 7: 33/Domain: propeptide #status predicted <DOB>

F; 34-103/Pproduct: insulin chain B-like #status predicted <DOB>
F; 63-74/Domain: insulin connecting peptide-like #status predicted <CHC>
F; 75-95/Domain: insulin chain A-like #status predicted <DOA>
F; 75-103/Domain: peptide D #status predicted <CHD>
F; 76-103/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>
F; 39-81,51-94,80-85/Disulfide bonds: #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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Pred. No. 1.8e-39;
1; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 CAPLKPAKAARSVRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: protein
A; Residues: 34-103 <FRA>
A; Experimental source: fetal plasma
C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 75.1%;
96.5%;
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A;Residues: 1-154 <DIC>
A;Cross-references: EMBL:X51358
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Matches 83; Conser
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R;Tavakkol, A.; Simmen, F.A.; Simmen, R.C.M.
Mol. Endocrinol. 2, 674-681, 1988
A;Title: Porcine insulin-like growth factor-I (pIGF-I): complementary deoxyribonucleic a es.
es.
A;Reference number: A34938; MUID:89096956
A;Recisesion: A34938
A;Residues: Y'.21-153 <TAV>
A;Residues: Y'.21-153 <TAV>
A;Residues: Y'.21-153 <TAV>
A;Cross references: GB:M31175
A;Gross references: GB:M3175
A;Gross references: GB:M3175
A;Arlte: Purification, amino acid sequences and assay cross reactivities of porcine insumal control of the control of th
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Biosci. Biotechnol. Biochem. 59, 87-82, 1995
Bissci. Biotechnol. Biochem. 69, 187-85, 1995
Fitle: Dynamic aspects in the expression of the goat insulin-like growth factor-I (IGF eference number: JC2483; MUID:95201385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DDBJ:D26119
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C;Species: Capra aegagrus hircus (domestic goat)
C;Date: 16-Mar-1995 #sequence_revision 26-May-1995 #text_change 17-Mar-1999
C;Accession: JG2483
R;Mikewa, S.; YoShikawa, G.; Aoki, H.: Yamano. V · Galai U · Vormino m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  50 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
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A.Rosidues: 1-154 <MIK>
A.Cross-references: GB:S11378; DDBJ:D26116; DDBJ:D26117; DDBJ:D26118; C
C.Genetics: 21/3; 75/1; 135/3
A.Introns: 21/3; 75/1; 135/3
F.1-19/Pomain: signal sequence #status predicted <SIG>
F.1-19/Pomain: signal sequence #status predicted <SIG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Uperfamily: insulin

C.Keywords: growth factor

F;1-22/Domain: signal sequence #status predicted <SIG>

F;23-48/Domain: propeptide #status predicted <PRO>

F;249-153/Product: insulin-like growth factor IA #status experimental
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96.5%; Pred. No. 7.8e-40;
Mismatches 2;
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Pred. No. 3e-40;
1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 76.4%;
Best Local Similarity 97.7%;
Matches 84; Conservative
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Residues: 49-117,'X' <FRA>
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Matches 83; Conserv
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12 RESULT S22878

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A.Accession: B27804
A;Molecule type: DNA
A;Cross-references: 1-153 cSH1>
A;Cross-references: GB:M15651; GB:J02743; NID:q204297; PIDN:AAA41215.1; PID:q204300
B;Casella, S.J.; Smith, E.P.; Van Wyk, J.J.; Joseph, D.R.; Hynes, M.A.; Hoyt, E.C.; L
DNA 6, 325-330, 1987
A;Title: Isolation of rat testis cDNAs encoding an insulin-like growth factor I precu
A;Reference number: A27849; MuID:88003970
A;Accession: A27849
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A; Residues: 27-153 < CAS>
A; Residues: 27-153 < CAS>
A; Cross-references: GB: Miura, Y: Noguchi, T.
A; Cross-references: GB: Miura, Y: Noguchi, T.
Agric. Biol. Chem. 54, 1599-1601, 1990
A; Title: A new CDNA clone relating to larger molecular species of rat insulin-like gr A; Reference number: JH0133; MUID:91103966
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A; Residues: 46-1153 400R>
A; Cross-references: GB:MJ714; NID:g204324; PIDN:AAA41227.1; PID:g204325
A; Cross-references: GB:MJ714; NID:g204324; PIDN:AAA41227.1; PID:g204325
R; Kato, H.; Takenaka, A.; Miura, Y.; Nishiyama, M.; Noguchi, T.
Agric. Biol. Chem. 54, 2222-2230, 1990
A; Title: Bvidence of introduction by molecular cloning of artificial inverted sequenc
A; Reference number: JN0088; MJID:91136779
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A,Residues: 'MSAPP',22-153 <KA2>
A,Experimental source: liver
A;Note: the authors present evidence that this mRNA may contain an artifactual invers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              insulin-like growth factor IA precursor - rat
N;Alternate names: IGF-IA; somatomedin C
C;Species: Rattus norvegicus (Norway rat)
C;Date: 16-Mar-1989 #sequence_rovision 16-Mar-1989 #text_change 21-Jul-2000
C;Accession: B27804; A27849; JH0133; A28504; JN0088; A32857; A61096
R;Shimatsu, A.; Rotwein, P.
J; Biol. Chem. 262, 7894-7900, 1987
A;Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence, A;Reference number: A27804; MUID:87222423
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                                                                                                                                                                                                                                                                                                                                                                                              predicted <CTP>
                                   C. Superfamily: insulin
C. Keywords: alternative splicing; growth factor
C. Keywords: alternative splicing; growth factor
F.1-22/Domain: signal sequence #status predicted <SIG>
F.23-127/Product: insulin-like growth factor IA (active) #status predicted
F.23-51/Domain: insulin connecting C peptide-like #status predicted <DOD>
F.52-63/Domain: insulin connecting C peptide-like #status predicted <DOC>
F.64-84/Domain: insulin chain A-like #status predicted <DOD>
F.85-92/Domain: D peptide #status predicted <DOD>
F.93-127/Domain: carboxyl-terminal propeptide (E peptide) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
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A.Experimental source: liver
R.Murphy, L.J.; Bell, G.I.; Duckworth, M.L.; Friesen, H.G.
Endocrinology 121, 684-691, 1987
A.Fitle: Identification, characterization, and regulation of a rat comple
A.Reference number: A28504; MUID:87246437
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  86
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A; Molecule type: mRNA
A; Residues: 27-153 <KAT>
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B27804
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Residues: 1-127 <= RBL>

Accross-references: 68:X04480; NID:951801; PIDN:CAA28168.1; PID:951802

R.Tollefsen, S.E.; Lajara, R.; McCusker, R.H.; Clemmons, D.R.; Rotwein, P.
J. Biol. Chem. 264, 13810-13817, 1989

A. Title: Insulin-like growth factors (IGF) in muscle development. Expression of IGF-I, the Arecession: I55295

A. Reference number: 155295; MUID:89340472

A. Reference number: 155295; MUID:89340472

A. Residues: 49-108 <- RES>

A. Residues: 159090; MUID:874977, 1986

A. Recession: I59090

A. Reference number: 159090; MUID:8709249

A. Recession: I59090

A. Reterence number: 159090; MUID:8709249

A. Residues: 49-108 <- RES>

A. Residues: 49-108 <- RES>
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C;Species: Mus musculus (house mouse)
C;Date: 30-Jun-1988 #sequence_revision 30-Jun-1988 #text_change 16-Jul-1999
C;Accession: A25540; 155295; 1599090; B25540
R;Bell, G.I.; Stemplen, M.M.; Fong, N.M.; Rall, L.B.
Nucleic Acids Res. 14, 7873-7882, 1986
A:Title: Sequences of liver cDNAs encoding two different mouse insulin-like growth factch A;Reference number: A93643; MUID:87040760
                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: protein
A; Residues: 50-119 < FRA>
C; Seperimental source: fetal plasma
C; Genetics: 1/3; 75/1; 135/3
C; Superfamily: insulin
C; Superfamily: insulin
C; Reywords: alternative splicing; growth factor; plasma
F; 1-21/Domain: propeptide #status predicted < PRO>
F; 22-49/Domain: propeptide #status predicted < PRO>
F; 50-189/Product: insulin chain B-like #status predicted < CHC>
F; 50-180/Domain: insulin chain A-like #status predicted < CHC>
F; 79-90/Domain: insulin chain A-like #status predicted < CHC>
F; 91-111/Domain: insulin chain A-like #status predicted < CHC>
F; 91-111/Domain: ansulin chain B-like #status predicted < CHC>
F; 91-111/Domain: ansulin chain B-like #status predicted < CHD>
F; 91-111/Domain: carboxyl-terminal propeptide (E peptide) #status predicted
F; 55-97, 67-110, 96-101/Disulfide bonds: #status predicted
                                                                           A; Molecule type: protein
A; Residues: 50-79 <HRTY
R; Francis, G.L.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.
Endocrinology 124, 1173-1183, 1989
A; Title: Sheep insulin-like growth factors I and II: sequences, activities and assays.
A; Reference number: 507198; MUID:89136887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
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Pred. No. 2e-39;
1; Mismatches 2; Indels
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A; Reference number: S04972; MUID:89323215
A; Accession: S07965
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1 Similarity 96.5%;
83; Conservative
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Best Local Similarity
Matches 83; Conserv
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R; Tamura, K.; Kobayashi, M.; Ishii, Y.; Tamura, T.; Hashimoto, K.; Nakamura, S.; Niwa, M. J. Biol. Chem. 264, 5616-5621, 1989
A; Title: Primary structure of rat insulin-like growth factor-I and its biological activing R; Reference number: A32857; MUID:89174609
A; Rocession: A32857
A; Molecule type: protein
A; Residues: 49-118 (TAMA)
R; Canalis. E.; McCarthy, T.; Centrella, M.
Endocrinology 122, 22-27, 1988
A; Title: Isolation and characterization of insulin-like growth factor I (somatomedin-C)
A; Reference number: A61096; MUID:88082445
A; Rocession: A61096
A; Molecule type: protein
A; Residues: 49-731, X', 55-65 < CAN>
C; Superfamily: insulin
C; Keywords: alternative splicing; growth factor I #status experimental <ILG>
F; 49-118/Product: insulin-like growth factor I #status experimental
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49 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108

Search completed: October 25, 2002, 15:59:29 Job time : 13.7048 secs

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Qy Dp

1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60

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Mon Oct 28 09:44:50 2002

06/1852,26

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October 25, 2002, 15:52:06; Search time 25.4096 Seconds (without alignments) 485.217 Million cell updates/sec
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/SIDSI/gogdata/genesegy/genesegp-embl/AA1983.DAT:*
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/SIDSI/gogdata/genesegy/genesegp-embl/AA1985.DAT:*
/SIDSI/gogdata/genesegy/genesegp-embl/AA1986.DAT:*
/SIDSI/gogdata/genesegy/genesegp-embl/AA1988.DAT:*
/SIDSI/gogdata/genesegy/genesegp-embl/AA1988.DAT:*
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GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          747574 seqs, 111073796 residues
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Maximum Match 100%
Listing first 45 summaries
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Gapop 10.0 , Gapext 0.5
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Maximum DB seq length: 200000000
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution. /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:*/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1000.DAT:*/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA2000.DAT:*/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA2001.DAT:*

Description	Rat IGF-I isoform	Rabbit IGF-I isofo	Rabbit insulin lik	Human IGF-I isofor	Rat liver-type IGF	Rat liver-type IGF	Sequence of pre-pr	Human liver-type I	Human insulin-like	Insulin-like growt	Human IGF-1. Homo
SUMMARIES	ÀAE02448	AAE02449	AAW23301	AAE02447	AAE02451	AAE02531	AAP70277	AAE02450	AAU09067	AAR83803	AAW69733
	22	22	18	22	22	22	8	22	22	16	19
% Query Match Length DB	111	111	121	110	105	105	195	105	137	153	153
% Query Match	100.0	85.5	85.5	82.6	78.6	78.6	77.5	9.07	9.02	9.02	9.07
Score	599	512	512	494.5	471	471	464	423	423	423	423
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Human IGF-I protei Goat Insulin like Human insulin like Rabbit liver-type Human prepro-somat Rabbit liver-type Chimeric rhIGF-I-A	Pep 17 used in nuc Peptide ligand Pep Nuclear ligand Pep Nucleic acid trans Rainbow trout insu Flatfish insulin-1	Insulin-like growt Recombinant botuli Sequence of human Sequence of oxidat Sequence of human New insulin-like growt	hIGF-I. Homo sapi Peptide derived fr Human IGF-I peptid Sequence of insuli Human insulin-like Insulin like growt Wild type IGF-I se	Peptide derived fr Peptide derived fr Human mature insul Human insulin-like Human insulin-like Insulin like growt Amino acid sequenc
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AAW57882 AAR40844 AAW23302 AAE02452 AAP60578 AAE02456 AAW64068	AAY98482 AAY59027 AAU04272 AAB45835 AAR88089	AAP81212 AAW56011 AAP40034 AAP70414 AAP71539 AAP91502 AAR36846	AAR41774 AAR43606 AAR48590 AAR55275 AAR75657 AAR86874	AAK89949 AAW33907 AAW12342 AAB12769 AAB12772 AAB09616
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ALIGNMENTS

AAE02448 standard; Protein; 111 AA.

RESULT 1

AAE02448;

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/SIDS1/gcgdata/geneseq/geneseqp-embl/AA1993.DAT

/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:

/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1996.DAT

DŢ	10-AUG-2001 (first entry)
XX	
DE	Rat IGF-I isoform mechano-growth factor (MGF) protein.
XX	
ΚW	Rat; IGF-I isoform; Insulin-like Growth Factor-I; MGF;
ΚW	mechano-growth factor; neurological disorder; neurodegenerative disorder;
ΚW	amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy;
ΚW	poliomyelitis; post-polio syndrome; toxin; motoneurone disorder;
ΚW	nerve damage; autosomal muscular dystrophy; diabetic neuropathy;
ΚW	sex-linked muscular dystrophy; peripheral neuropathy;
ΚW	Alzheimer's disease; Parkinson's disease.
XX	
SO	Rattus sp.
XX	
PN	WO200136483-A1.
XX	
PD	25-MAY-2001
XX	
PF	15-NOV-2000; 2000WO-GB04354.
XX	
PR.	15-NOV-1999; 99GB-0026968.
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PA	(UNLO) UNIV COLLEGE LONDON.
xx	
PI	Goldspink G, Johnson I;
xx	
DR	WPI; 2001-355620/37.
DR	N-PSDB; AAD06399.

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an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducting motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF polyncleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder, including a disorder of motoneurones and/or neurodegenerative disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, progressive poliomyellusis or post-polio syndrome, a disorder caused by exposure to a
                                                                                                                                                                                                                                                                                                                                                                                                                  toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with aging, autosomal or sex-linked muscular dystrophy, diabetic neuropathy, peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is rat IGF-I isoform MGF: MGF is a muscle isoform having extracellular (Ec) domain, hence also referred as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF; mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-pollo syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease.
                 Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of medicament for the treatment of neurological disorder -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     isoform having extracellular (Ec) domain, hence also referred as IGF-I-Ec. The MGF protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4, 5 and 6 in the reading frame
                                                                                                                                                         The present invention relates to use of mechano-growth factor (MGF),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rabbit IGF-I isoform mechano-growth factor (MGF) protein.
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100.0%; Pred. No. 1.6e-51;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAE02449 standard; Protein; 111 AA.
                                                                                                                Claim 4; Page 52; 66pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          111 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of MGF.
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AAE02449
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Gaps

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The present invention relates to use of mechano-growth factor (MGF),

an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
medicament for the treatment of neurological disorder. The MGF is capable

CC reducing motoneurone loss by 20% or greater in response to nerve

cof reducing motoneurone loss by 20% or greater in response to nerve

cof reducing motoneurone loss by 20% or greater in response to nerve

covilision, and effects motoneurone rescue, preferably adult motoneurone

cc rescue. The MGF polynucleotide and polypeptide are useful in the

cc manufacture of a medicament for the treatment of a neurological disorder,

including a disorder of motoneurones and/or neurologenerative disorder,

cc including a disorder of motoneurone and/or neurologenerative disorder,

cc spinal muscular atrophy, infantile or juvenile muscular atrophy,

cc spinal muscular atrophy, infantile or juvenile muscular atrophy,

cc toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an

cc injury that affects motoneurones, motoneurone lesion or nerve damage,

cautosomal or sex-linked muscular dystrophy, diabetic neuropathy,

cautosomal or sex-linked muscular dystrophy, diabetic neuropathy,

cautosomal or sex-linked muscular dystrophy, diabetic neuropathy,

cutosomal neuropathies, Alzheimer's disease and Parkinson's disease.

CC isoform having extracellular (EC) domain, hence also referred as

cc isoform having extracellular (EC) domain, hence sencoded by

cc isoform the motoneurone and sequences encoded by

cc isoform card sequence of IGF-I exons 4, 5 and 6 in the reading frame
                                                                                                                                Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GPETLCGAELVDALQEVCGDRGEYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Insulin like growth factor 1; IGF-1; Ec peptide; muscle disorder;
                                                                                                           Use of mechano-growth factor, an isoform of Insulin-like Growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 512; DB 22;
Pred. No. 5.5e-43;
3; Mismatches 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UNLO ) ROYAL FREE HOSPITAL SCHOOL MED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rabbit insulin like growth factor 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAW23301 standard; Protein; 121 AA
                                                                                                                                                                                                   Claim 4; Page 54; 66pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                85,5%;
86,5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    heart; neuromuscular disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97WO-GB00658
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 85.5°
Best Local Similarity 86.5°
Matches 96; Conservative
Goldspink G, Johnson I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Oryctolagus cuniculus.
                                         WPI; 2001-355620/37.
N-PSDB; AAD06400.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         111 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9733997-A1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11-MAR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Goldspink G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-SEP-1997.
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WO200136483-A1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAE02451;
                                                                                                                                                                                                                                                                                                                                               Seguence
                                                                                                                                                                                                                                                                                                                       of MGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 5
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                                                                                                                 A use of insulin like growth factor I (IGF-1) has been developed, and is characterised by the presence of the Ec peptide, or a functional equivalent, in the treatment or therapy of a human or animal. The IGF-1 polypeptide can be used to treat muscular disorders, e.g. Duchenne or Becker muscular dystrophies and related progressive skeleral muscle weakness and wasting, muscle atrophy in ageing humans, spinal cord injury induced muscle atrophy and neuromuscular diseases, and cardiac disorders, e.g. diseases where promotion of cardiac mescle protein synthesis is a beneficial treatment, cardiomyopathies and acute heart failure or insult, specifically myocarditis or myocardial infarction. It can also be used to promote bone fracture healing and maintenance of bone in old age. The present sequence represents rabbit IGF-1 used in the present specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; IGF-I isoform; Insulin-like Growth Factor-I; MGF, mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclenosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; nerve damaqe; autrosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                     1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                             peptide - to treat humans or animals, particularly muscle disorders, heart conditions or neuromuscular diseases
                                                                                                                                                                                                                                                                                                                                                                                  DB 18; Length 121;
                                                                                                                                                                                                                                                                                                                                                                                                                     CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK 111
                                                                                                                                                                                                                                                                                                                                                                                                                                 Human IGF-I isoform mechano-growth factor (MGF) protein.
                                                                                                                                                                                                                                                                                                                    85.5%; Score 512; DB 16
86.5%; Pred. No. 6e-43;
iive 3; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAE02447 standard; Protein; 110 AA
                                                                                               Disclosure; Fig 3; 33pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-NOV-2000; 2000WO-GB04354
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                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goldspink G, Johnson I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-355620/37.
           WPI; 1997-470877/43
                                                                                                                                                                                                                                                                                                                                Best Local Similarity
Matches 96; Conserv
                                                                                                                                                                                                                                                                                               121 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-PSDB; AAD06398
                         N-PSDB; AAT84893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200136483-A1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-AUG-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAE02447;
                                                                                                                                                                                                                                                                                               Seguence
                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 4
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The present invention relates to use of mechano-growth factor (MGF),

an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
medicament for the treatment of neurological disorder. The MGF is capable

of reducing motoneurone loss by 20% or greater in response to nerve

avulsion, and effects motoneurone rescue, preferably adult motoneurone

contained an amedicament for the treatment of a neurological disorder,

including a disorder of motoneurones and/or neurodegenerative disorder,

including a disorder of motoneurones and/or neurodegenerative disorder,

e.g., amyotrophic lateral sclerosis, spinal muscular atrophy,

conjournyellitis or post-polic syndrome, a disorder caused by exposure to a

toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an

conjournyellitis or post-polic syndrome, a disorder caused by exposure to a

toxin, motoneurone trauma, a motoneurone loss associated with aging,

cutosomal or sex-linked muscular dystrophy, diabetic neuropathy,

conform having extracellular (EC) domain, hence also referred as

conform having extracellular (EC) domain, hence also referred as

conform having extracellular (EC) domain, hence also referred as

conform having extracellular (EC) domain, hence also referred as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1;
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                                       Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder - \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mechano-growth factor, an isoform of Insulin-like Growth
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 22; Length 110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    111
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IGF-I isoform; Insulin-like Growth Factor-I; MGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 494.5; DB 22
pred, No. 2.9e-41;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. 2.96
2; Mismatches
                                                                                                                                                                      Claim 4; Page 50-51; 66pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            82.6%;
85.6%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-NOV-2000; 2000WO-GB04354
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Best Local Similarity 85.6
Matches 95; Conservative
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The present invention relates to use of mechano-growth factor (MGF), an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone rescue, preferably adult motoneurone rescue. The MGF polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder, including a disorder of motoneurones and/or neurodegenerative disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infanile or juvenile muscular atrophy, solicy syndrome, a disorder caused by exposure to a toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurone, motoneurone loss associated with aging mutcomal or sex-linked muscular dystrophy, disease and barkingon, and autosomal contents.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rat; IGF-I isoform; Insulin-like Growth Factor-I; MGF; mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motomeurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease; liver; L.IGF-I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Note: The present sequence (SEQ ID NO: 12) is stated as being the same as that shown in figure 9 (AAE02531) of the specification. However
                                                                                                    Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of medicament for the treatment of neurological disorder -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is rat liver type IGF-I isoform (L.IGF-I). The L.IGF-I protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4 and 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rat liver-type IGF-I isoform (L.IGF-I) protein, alternative version.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        78.6%; Score 471; DB 22;
ilarity 100.0%; Pred. No. 5.6e-39;
Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "Encoded by ACC"
                                                                                                                                                                                            Disclosure; Page 58-59; 66pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       differs at a single position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 CVRCKPTKSARSIRAORHTDMPKTOK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10-AUG-2001 (first entry)
Johnson I;
                                      WPI; 2001-355620/37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
les 86; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  105 AA;
                                                              N-PSDB; AAD06404
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Goldspink G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rattus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
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Matches
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The present invention relates to use of mechano-growth factor (MGF), an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           including a disorder of motoneurones and/or neurodegenerative disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvanile muscular atrophy, poliomyelitis or post-polio syndrome, a disorder caused by exposure to a toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with aging,
                                                                                                                                                                                                                                                                                                                                                                                                                  of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder,
                                                                                                                                                                                                                                                    Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        autosomal or sex-linked muscular dystrophy, diabetic neuropathy, peripheral neuropathies, Alzhehmer's disease and Parkinson's disease. The present sequence is alternative version of rat liver-type IGF-I isoform (L.IGF-I). The L.IGF-I protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4 and 6.

Note: The present sequence is stated as being the same as SEO ID NO: 12 shown in sequence listing (AAE02451) of the specification. However
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GPETICGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence of pre-pro-insulin-like growth factor 1B (ppIGF-1B).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cell proliferation.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 471; DB 22;
Pred. No. 5.6e-39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Growth promoter; lactation enhancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAP70277 standard; protein; 195 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CVRCKPTKSARSIRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                            Disclosure; Fig 9; 66pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    it differs at a single position.
                                                                                       99GB-0026968.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            78.68;
                                                   15-NOV-2000; 2000WO-GB04354
                                                                                                                        (UNEO ) UNIV COLLEGE LONDON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               86; Conservative
                                                                                                                                                                Johnson I;
                                                                                                                                                                                                  WPI; 2001-355620/37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      105 AA;
                                                                                                                                                                                                                     N-PSDB; AAD06404.
                                                                                                                                                              Goldspink G,
                                                                                       15-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
               25-MAY-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
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Local Similarity
nes 78; Conserv
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                                                                                  N-PSDB; AAD06403
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                                 Goldspink G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11-0CT-2001.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
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Matches
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                                                                                                                                                                                                                                                                                                     A 42 base oligonucleotide corresponding to the DNA sequence encoding amino acids 10 to 23 of mature human IGF-I was synthesized (AAN70437). The radiolabelad 42 mer was then employed to screen for IGF-I containing DNA sequences in a human liver CDNA library. Insulinlike growth factors-IA and "IB CDNAS were isolated from a human CDNA library by using lambdagt 11 (AAN70435, AAN70436). The human IGF-I genomic gene was isolated and mapped. It encodes at least two preproinsulin-like growth factor-I proteins. An essentially pure proproinsulin-like growth factor-I protein comprising the sequence of amino acids shown in Figure six is claimed (AAP70277).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease; liver; L.IGF-I.
                                                                                                                                                                                                           New pre-pro-insulin-like growth factor-1 protein - obtd. by recombinant DNA procedures for use as growth promoters for enhancing lactation, for stimulating cell proliferation etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 195;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5e-38;
~hes 12; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRR 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human liver-type IGF-I isoform (L.IGF-I) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     77.5%; Score 464;
85.3%; Pred. No. 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAE02450 standard; Protein; 105 AA
                                                                                                                                                                                                                                                                          Claim 11; Fig 6; 59pp; English.
                               87EP-0870001
                                                              86US-0929671.
86US-0816662.
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                                                                                                              (UNIW ) UNIV OF WASHINGTON.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 85.3
Matches 87; Conservative
                                                                                                                                              Rotwein PS;
                                                                                                                                                                            WPI; 1987-200203/29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       195 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200136483-A1.
                               06-JAN-1987;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-NOV-1999;
                                                               20-NOV-1986;
                                                                              07-JAN-1986;
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22-JUL-1987
                                                                                                                                            Krivi GG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAE02450;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
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The present invention relates to use of mechano-growth factor (MGF), an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF Polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder, including a disorder of motoneurones and/or neurodegenerative disorder, eg., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or invenile muscular atrophy, progressive poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       toxin, motoneurone trumma, a motoneurone lesion or nerve damage, an injury that affects motoneurones, motoneurone loss associated with aging, autosomal or sax-linked muscular dystrophy, diabetic neuropathy, peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is human liver-type IGF-I isoform (L.IGF-I). The LIGF-I protein comprises amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4 and 6.
                                                                                                                                                                                                                                                                                      Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I, capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; long-term memory protein; LTM; insulin-like growth factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 423; DB 22;
Pred. No. 2.9e-34;
1; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human insulin-like growth factor, IGF1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Fig 8; 66pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAPLKPAKSARSVRAQRHTDMPKTQK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                70.6%;
ilarity 90.7%;
Conservative 1
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(UNIO ) UNIV COLLEGE LONDON.
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                                                                                  Johnson I;
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Peptide

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animal comprises treating with an agent that modulates the activity of one or more of genes from zif266, insulin-like growth factor (IGF), glutamate receptor 1 (GluR1), glutamate receptor 2 (GluR2), c/EBPbeta and neuroendocrine VGF (neurotropin-inducible gene). The method is useful for conducting a drug and/or target discovery business, which comprises conducting and around and of the agents (or their analogues) identified for efficacy and toxicity in animals, and formulating a pharmaceutical preparation including one or more agents identified as having an acceptable therapeutic profile and/or licensing to a third party the rights for further drug development of the identified agents. The method of conducting drug discovery business further comprises an additional step of establishing a distribution system for distributing the preparation for sale and may optionally pharmaceutical composition containing the agent is useful for enhancing memory, consolidation in an animal, or for augmenting learning and memory,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   or otherwise for enhancing the functional performance of central nervous system neurons, where the agent is a CAMP elevating agent (agonist) preferably a CAMP analogue or CAMP phosphodisesterase inhibitor, which activates adenylate cyclase. The composition is useful for treating diseases associated with learning disabilities, memory impairment e.g. due to toxicant exposure, brain injury, epilepsy, mental retardation in children and senile dementia, including Alzheimer's disease. The present sequence represents human insulin-like growth factor, IGF1.
                                                                                                                                                                                                                                                                                          The invention relates to modulating long term memory consolidation in an
                                                                                                                                                                Regulating memory consolidation in an animal comprising treating with an agent that modulates activity of one or more genes from zif268, insulin-like growth factor, glutamate receptor 2, c/\text{EBPb}beta and VGF -
                                                                                                                                                                                                                                                   Disclosure; Page 90-91; 100pp; English.
(UYBR-) UNIV BROWN RESEACH FOUND.
                     (HUGH-) HUGHES HOWARD MED INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-FEB-1996 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              78; Conservative
                                                            Bear MF;
                                                                                                 WPI; 2001-626335/72.
N-PSDB; AAS14695.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             137 AA;
                                                          Alberini CM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cancer;
asthma;
                                            Gaps
                                                                                                          13 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 92
                                                                                     1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Insulin-like growth factor 1 receptor; IGF-1; synthetic peptide;
autophosphorylation; cellular growth; proliferation; restenosis;
burn; wound; brain metastasis.
                                            .,
  Length 137;
                                          7; Indels
  Score 423; DB 22;
Pred. No. 3.8e-34;
1; Mismatches 7;
                                                                                                                                                                                         AAR83803 standard; protein; 153 AA.
                                                                                                                                                                   61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                     Insulin-like growth factor 1.
70.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
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Location/Qualifiers

Key

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The amino acid sequence of the insulin-like growth factor 1 pre-protein. Processing of the protein results in a 70 amino acid mature protein. The mature protein is split into 4 domains: the B domain has strong homology to the B chain of insulin, the A domain similarly has homology to the A chain of insulin. These domains are separated by a C domain and the mature protein is terminated by a D domain at the C-terminus. The D domain sequence was used to synthesis peptides (AAR83801-2) that include amino acid residues 60-64 of the mature IGF-1 protein. IGF-1 binds to the IGF-1 receptor (IGF-IR) via the D domain and induces activation of the IGF-IR by autophosphorylation of the IGF-IR. Activated IGF-IR is associated with cellular growth and proliferation. If synthetic peptides are useful as inhibitors of IGF-I binding to IGF-IR and thus may be used in the treatment of disorders characterised by undesirable cell proliferation eg. cancer, restenosis, asthma, burns,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                       New synthetic IGF-1 analogues comprising 5-25 amino acids - useful in treatment of diseases associated with undesirable cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; IGF-1; insulin-like growth factor 1; urinary incontinence;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
0
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               /label= mature peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 20-21; 28pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAW69733 standard; Protein; 153 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
                             49..77
/label= B domain
/label= C domain
90..110
/label= A domain
                                                                                                                                111..118
/label= D domain
                                                                                                                                                                                                                                                                                                                      (UYJE-) UNIV JEFFĘRSON THOMAS.
                                                                                                                                                                                                                                                     94WO-US14576.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   wounds or brain metastases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best_Local Similarity 90.7
Matches 78; Conservative
                                                                                                                                                                                                                                                                                                                                                        Baserga R, Jameson BA;
                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1995-231515/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 153 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        proliferation
                                                                                                                                                                                    WO9516703-A1.
                                                                                                                                                                                                                                                    15-DEC-1994;
                                                                                                                                                                                                                                                                                     15-DEC-1993;
                                                                                                                                                                                                                    22-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-0CT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human IGF-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAW69733;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                 Domain
                                                                Domain
                                                                                                  Domain
                                                                                                                                   Domain
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Dp
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DNA can be used in the vector of the invention, for expression of a nucleic acid sequence in a cell, which comprises: (a) a nucleic acid cassette containing a sequence encoding IGF-I; (b) a 5' flanking region including one or more sequences necessary for expression of the nucleic acid cassette, including a promoter from a skeletal alpha-actin gene; (c) a linker connecting the 5' flanking region to a nucleic acid, the linker having a position for inserting the nucleic acid cassette, and lacking the coding sequence of a gene with which it is naturally associated; and (d) a 3' flanking region, including a 3' untranslated region or a 3' non coding region or both, where the 3' flanking region is 3' to the position for inserting the nucleic acid cassette and comprises a sequence from a growth hormone 3' urg. The vector can provide for efficient IGF-I expression, particularly in gene therapy. It can be used for the delivery of IGF-I for treating diseases such as muggle atrophy,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 diabetes, neuropathy, osteoporosis, and growth disorders. They can be used for treating peripheral neuropathies resulting from diabetes, genetic disease such as Type I or Type II diabetes, genetic disease such as Chacot-marie-tooth disease, AIDS, atherogenesis, atherosclerotic, cardiovascular, cerebrovascular, or peripheral vascular disease, haemophilia, inflammation and side-effects from anti-cancer and anti-viral drugs. The vectors can also be used to create transgenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                            This sequence is the human insulin-like growth factor I (IGF-I).
                                                                                                                                                                                                                        New vector for expression of insulin-like growth factor-I containing a skeletal alpha-actin gene promoter, IGF-I coding sequences and a 3' region from growth hormone 3'-UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 423; DB 19;
Pred. No. 4.2e-34;
1; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 animals for research or livestock improvement.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Insulin; growth factor; bone; tumour therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                              Schwartz R;
                                                                                                                                                                                                                                                                                                                  Disclosure; Fig 13; 115pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAR40844 standard; Protein; 154 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
                                               (BAYU ) BAYLOR COLLEGE MEDICINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      70.68;
96US-0031539.
                                                                                                                                                      WPI; 1998-333339/29.
N-PSDB; AAV40793, AAV40794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         03-MAR-1994 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                 (GENE-) GENEMEDICINE INC.
                                                                                                              Demayo FJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           153 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JP05199878-A.
02-DEC-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Capra hircus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-AUG-1993.
                                                                                                              Coleman M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAR40844;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 13
AAR40844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IGF-I; insulin-like growth factor I; skeletal alpha-actin gene promoter; muscle atrophy; diabetes; osteoporosis; growth disorder; therapy; AIDS; Chacot-marie-tooth disease; atherogenesis; haemophilla; neuropathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A method has been developed of treating urinary incontinence (UI) in mammals. The method comprises delivering a nucleic acid vector for the expression of a growth factor or neurotrophic factor in a tissue or tissues. The present sequence represents human IGF-1 (insulin-like growth factor 1) which is used in the method of the invention. Due to the growth and stimulatory effects of growth factors and neurotrophic factors, introducing these factors to degenerated muscles in the urinary system can improve UI by enhancing both their integrity and neural innervation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                Treatment of urinary incontinence - by delivering nucleic acid vector for expression of growth factor or neurotrophic factor in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 423; DB 19;
Pred. No. 4.2e-34;
1; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 12d; Page 108-109; 117pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86
gene therapy; neurotrophic factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 CVRCKPTKSARSIRAQRHTDMPKTQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAW57882 standard; Protein; 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       70.6%;
90.7%;
                                                                                                                                                                                                                          97US-0036862
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                                                                                                                                                                                98WO-US02051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 70.68
Best Local Similarity 90.73
Matches 78; Conservative
                                                                                                                                                                                                                                                                     (GENE-) GENEMEDICINE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human IGF-I protein.
                                                                                                                                                                                                                                                                                                                                                            WPI; 1998-437184/37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             153 AA;
                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB; AAV50425
                                               Homo sapiens
                                                                                       WO9833529-A1
                                                                                                                                                                              04-FEB-1998;
                                                                                                                                                                                                                          04-FEB-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W09824922-A1
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                                                                                                                                   06-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tissue(s)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
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Gaps

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Gaps

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Length 156; Indels

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A use of insulin like growth factor I (IGF-1) has been developed, and is characterised by the presence of the Ec peptide, or a functional equivalent, in the treatment or therapy of a human or animal. The IGF-1 polypeptide can be used to treat muscular disorders, e.g. Duchenne or Becker muscular dystrophy, autosomal dystrophies and related progressive skeletal muscle weakness and wasting, muscle atrophy in ageing humans, spinal cord injury induced muscle atrophy and neuromuscular diseases, and cardiac disorders, e.g. diseases where promotion of cardiac muscle protein synthesis is a beneficial treatment, cardiomyopathies and acute heart failure or insult, specifically myocarditis or myocardial infarction. It can also be used to promote bone fracture healing and maintenance of bone in old age. The present sequence represents human IGF-1 Ea isoform used in the present specification.
                                                                                                                                                                                                                                                                                                                                                                                                      52 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 111
                                                                                                                                                                                                                                                                                                                                                                                   1. GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                         Score 423; DB 18;
Pred. No. 4.3e-34;
1; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAE02452 standard; Protein; 105
                                                                                                                                                                                                                                                                                                           70.68;
90.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UNLO ) UNIV COLLEGE LONDON.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-NOV-2000; 2000WO-GB04354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99GB-0026968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Oryctolagus cuniculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-355620/37.
N-PSDB; AAD06405.
                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 78; Conserv
                                                                                                                                                                                                                                                                       156 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200136483-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-NOV-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-AUG-2001
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                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAE02452;
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       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       50 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                            is used for growth of bone and the therapy of tumours. The IGF-1 which is used for growth of bone and the therapy of tumours. The IGF-1 precursor is prepared by inserting the codding sequence into an expression vector, transforming a host cell with the expression vector. Culturing the transformed cell and retrieving the IGF-1 precursor from the culture supernatant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Use of insulin like growth factor I characterised by presence of Ecpeptide - to treat humans or animals, particularly muscle disorders, heart conditions or neuromuscular diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Insulin like growth factor 1; IGF-1; Ec peptide; muscle disorder;
                                                                                                                                                                                               tumour
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 423; DB 14; Length 1.
Pred. No. 4.2e-34;
                                                                                                                                                                          Soat insulin-like growth factor I - useful for prepn. of insulin-like growth factor I used for growth of bone and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human insulin like growth factor 1 Ea isoform.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UNLO ) ROYAL FREE HOSPITAL SCHOOL MED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAW23302 standard; Protein; 156 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                 Claim 2; Figure 1; 6pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Fig 4; 33pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                         70.68;
90.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              heart; neuromuscular disease
     91JP-0347820.
                                          91JP-0347820.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             78; Conservative
                                                                                                                    WPI; 1993-284680/36
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity
                                                                                                                                                                          Goat insulin-like
                                                                                                                                                                                                                                                                                                                                                                                                                        154 AA;
                                                                               (KOMA/) KOMANO T.
                                                                                                                                       N-PSDB; AAQ47804
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     02-DEC-1991;
                                          02-DEC-1991;
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RESULT 14 AAW23302

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The present invention relates to use of mechano-growth factor (MGF), an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rabbit; IGF-I isoform; Insulin-like Growth Factor-I; MGF; mechano-growth factor; neurological disorder; neurodegenerative disorder; amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; poliomyelitis; post-polio syndrome; toxin; motoneurone disorder; nerve damage; autosomal muscular dystrophy; diabetic neuropathy; sex-linked muscular dystrophy; peripheral neuropathy; Alzheimer's disease; Parkinson's disease; liver; L.IGF-I
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                                                                                                                                                                                                                                                                                                                                                                  Rabbit liver-type IGF-I isoform (L.IGF-I) protein.
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of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone cavulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF polymorlectide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder, including a disorder of motoneurones and/or neurodegenerative disorder, co.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, progressive co.g. poliomyelitis or post-polio syndrome, a disorder caused by exposure to a control or sex-linked muscular dystrophy, diabetic neuropathy, co.g. puripheral neuropathies. Alzhainer's disease and Parkinson's disease. Co.g. The present sequence is rabbit liver-type IGF-I isoform (L.IGF-I).

The L.IGF-I protein comprises amino acid sequences encoded by conclete acid sequence (SEQ ID NO: 14) is stated as being the same as that shown in figure 10 (AAE02456) of the specification. However it differs at few positions.
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Sequence 105 AA;

Ouery Match 70.1%; Score 420; DB 22; Length 105; Best Local Similarity 89.5%; Pred. No. 5.7e-34; Matches 77; Conservative 2; Mismatches 7; Indels 0; Gaps 0;

61 CVRCKPTKSARSIRAQRHTDMPKTQK 86

Qy Dp

QY Db Search completed: October 25, 2002, 15:57:10 Job time: 26.4096 secs

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STATE: VA
US-09-142-583A-4
RESULT 1
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Sequence 9, Appli
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/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
            GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
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US-08-950-720A-9
US-08-219-878A-1
PCT-US93-04329-1
US-09-142-583A-11
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US-08-460-971A-47
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US-07-953-230A-9
US-07-947-035-1
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US-08-482-271-1
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US-08-432-517-1
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PCT-US95-08925-1
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                                                                                                                                                                                                                                                                                                                                   length: 0
length: 2000000000
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Maximum DB seq
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Sequence 14, Appl
Sequence 14, Appl
Sequence 3, Appl
Sequence 39, Appl
Sequence 39, Appl
Sequence 12, Appl
Sequence 18, Appl
Sequence 12, Appl
Sequence 12, Appl
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Pred. No. 1.6e-51;
3; Mismatches 12; Indels
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COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC Compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/GB97/00658
FILING DATE: 11-MAR-1997
APPLICATION NUMBER: GB 9605124.8
FILING DATE: 11-MAR-1996
US-07-989-845-28
US-07-989-844-12
US-08-161-04-12
US-08-240-121-12
US-08-451-241-12
PCT-US9-11297-12
PCT-US9-11297-12
US-08-029-267-14
US-08-329-961-8
US-08-329-961-8
US-08-328-961-8
US-08-989-251-39
US-09-328-108-39
US-09-328-108-39
US-08-31-8858-12
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US-08-31-88-31-8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: NIXON & VANDERHYE P.C. STREET: 1100 NORTH GLEBE ROAD CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: SADOFF, B. J.
REGISTRATION NUMBER: 36663
REFERENCE/DOCKET NUMBER: 117-263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: GOLDSPINK, GEOFFREY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION: TELEPHONE: 7038164000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-142-583A-4
; Sequence 4, Application US/09142583A
; Patent No. 6221842
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SEQUENCE CHARACTERISTICS:
LENGTH: 121 amino acids
TYPE: amino acid
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86.5%;
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Best Local Similarity 86.5
Matches 96; Conservative
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ADDRESSEE:
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11 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 70
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                                                        61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK 111
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                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: CHEN, Thomas T
APPLICANT: CHEN, Thomas T
TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED
TITLE OF INVENTION: FROM RAINBOW TROUT
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
ADDRESSE: Burns, Doane, Swecker & Mathis
STREET: George Mason Bldg., Washington & Prince Sts.
CITY: Alexandria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: /note= "Gap of 27 after 116."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
EILLING DATE: US/07/953,230A
FILLING DATE: 30-SEP-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "Gap of 2 after 7."
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NAME: Crane-Feury, Sharon E
REGISTRATION NUMBER: 36,113
REFERENCE/DOCKET NUMBER: 028755-010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 836-5021
INFORMATION FOR SEQ 1D NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 137 amino acids
TYPE: amino acid
STRANEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                       STATE: Virginia
COUNTRY: United States
ZIP: 22313-1404
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 2
US-07-953-230A-10
; Sequence 10, Application US/07953230A
; Patent No. 5476779...
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Matches 78; Conservative
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OTHER INFORMATION:
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LOCATION: 116
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Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
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Patent No. 5473054
GENERAL TREORMATION:
APPLICANT: Bradford A. Jameson and Renato Baserga
TITLE OF INVENTION: IGF-1 Analogs
UNDABER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             70.6%; Score 423; DB 3;
ilarity 90.7%; Pred. No. 3.2e-41;
Conservative 1; Mismatches 7
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Kurtz Mackiewicz & No. 5473054ris
                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
Sequence 9, Application US/08950720A; Patent No. 6046028; GENERAL INFORMATION:
APPLICANT: Conklin, Darrell C.
APPLICANT: Lofton-Day, Catherine E.
APPLICANT: Lok, Si
APPLICANT: Lok, Si
APPLICANT: Jaspers, Stephen R.
TILE OF INVENTION: INSULIN HOMOLOG
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/08/950,720A FILING DATE: CLASSIFICATION: 435
                                                                                                                                                                                                                    ADDRESSEE: ZymoGenetics, Inc.
STREET: 1201 Eastlake Avenue East
CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             86
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Sawislak, Deborah A
REGISTRATION NUMBER: 37,438
REFERENCE/DOCKET NUMBER: 96
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-442-6672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: No. 6046028e
                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
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INFORMATION FOR SEQ ID NO:
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Matches 78; Conserv
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Gaps
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Sequence 11, Application US/09142583A
Patent No. 6221842
GENERAL INFORMATION:
APPLICANT GOLDSPINK, GEOFFREY
TITLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 156;
                                                                                                                                                                                                                                                   70.6%; Score 423; DB 5; Length 153; 90.7%; Pred. No. 3.3e-41;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
CERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: WO PCT/GB97/00658
FILING DATE: 11-MAR-1997
APPLICATION NUMBER: GB 9605124.8
FILING DATE: 11-MAR-1996
ATTORNEY/AGENT INFORMATION:
NAME: SADOFF, B. J.
REGISTRATION NUMBER: 36663
REFERENCE/DOCKET NUMBER: 117-263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/142,583A
FILLING DATE: 29-oct-1998
CLASSIFICATION: <u >un

                                                                                                                                                                                                                                                                                               1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE: NIXON & VANDERHYE P.C. STREET: 1100 NORTH GLEBE ROAD CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 11:
US-09-142-583A-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                   109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
                                                                                                                                                                                                                                                                                                                                                                                                                          61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
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33,229
                   REFERENCE/DOCKET NUMBER: TJ
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OMMUN. 703010
TELEPHONE: 703010
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                                                           TELEPHONE: (215) 568-3100
TELEPAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 1: SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                               78; Conservative
  REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: USA
ZIP: 22201
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Best Local Similarity
'-hag 78; Conserve
                                                                                                                                                                     TYPE: AMINO ACID
                                                                                                                                                                                                                                                                         Best Local Similarity
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                                                                                                                                                                                     ; TOPOLOGY:
PCT-US93-04329-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 70.6%; Score 423; DB 1; Length 153; Best Local Similarity 90.7%; Pred. No. 3.3e-41; Matches 78; Conservative 1; Mismatches 7; Indels
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COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOS
                                                                                                                             DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Bradford A. Jameson and Renato Baserga
TITLE OF INVENTION: IGF-1 Analogs
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: Woodcock Washburn
ADDRESSEE: Kurtz Mackiewicz & Norris
STREET: One Liberty Place - 46th Floor
CITY: Philadelphia
: One Liberty Place - 46th Floor Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: WORDPERFECT 5.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/04329
FILING DATE: 19930507
                                                                                                                                                                                                                               APPLICATION NUMBER: US/08/219,878A FILLING DATE: 30-MAR-1994 CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                              NAME: Mark DeLuca
RECISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJU-1240
TELECOMMUNICATION INFORMATION:
TELEPHONE: (215) 568-3439
INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/881,524
FILING DATE: 08-MAY-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        109 CAPLKPAKSARSVRAQRHTDMPKTQK 134
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PCT-US93-04329-1
pquence 1, Application PC/TUS9304329
GENERAL INFORMATION:
                                                                                                                                                                       PC-DOS/MS-DOS
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APPLICATION NUMBER: 07/881,524
AFILING DATE: 08-MAY-92,
ATTORNEY AGENT INFORMATION:
NAME: MATK DELUCA
                                                                                                                                             IBM PC compatible
                                                                                                                                                                                       SOFTWARE: WORDPERFECT 5.1 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
                                                                               ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETTI
                                                                                                                                             COMPUTER: IBM PC OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TOPOLOGY: linear
US-08-219-878A-1
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                                                                USA
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                                                                COUNTRY:
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STATE:
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1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
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                                                                                                                                                  Length 191;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Tekamp-Olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
TITLE OF INVENTION: PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Suite 310
                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/24
                                                                                                                                    68.9%; Score 412.5; DB 3;
89.7%; Pred. No. 6.7e-40;
Mismatches 7;
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Pred. No. 6.7e-40;
1; Mismatches 7
                                                                                                                                                                      Pred. No. 6.76
1; Mismatches
                                                                                                                                                                                                                                                                                                                          61 CVRCKPTKSA-RSIRAQRHTDMPKTQK 86
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/989,251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
REFRENCE/DOCKET NUMBER: 5784
TELECOMMULICATION INFORMATION:
TELEPHONE: 919 420 2202
TELEFAX: 919 881 3175
41:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            68.98;
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: ATTORNEY/AGENT INFORMATION:
                                       191 amino acids
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                      Best Local Similarity 89.7
Matches 78; Conservative
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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Matches 78; Conservative
                   SEQUENCE CHARACTERISTICS
                                                                                        ; MOLECULE TYPE: protein US-08-989-251-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear MOLECULE TYPE: protein
                                                         amino acid
                                                                             linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
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                                                                         TOPOLOGY:
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                                     LENGTH:
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                                                                                                                                                    Query Match
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                                       Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDHRRLEMY 74
                 1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  69.4%; Score 416; DB 6; Length 119;
89.5%; Pred. No. 1.5e-40;
.ive 1; Mismatches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 41, Application US/08989251
Patent No. 6017731
GENERAL INFORMATION:
APPLICANT: Tekamp-Olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
TITLE OF INVENTION: PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
ADDRESSEE: 8611 Seltzer IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Suite 310
                                                                                                                                                                                                                         ;Patent No. 5405942
; aPPLICANT: BELL, GRAEME I.;RALL, LESLIE B.;MERRYWEATHER,
                                                                                                                                                                                                                                                                 JAMES P. TITLE OF INVENTION: PREPRO INSULIN-LIKE GROWTH FACTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/989,251
                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/65,673
FILING DATE: 16-JUN-1987
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 630,557
FILING DATE: 19-JUL-1984
                                                                                                            86
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
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NAME: SPRUILL, W. MURTAY
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 5784-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919 420 2202
TELEPHONE: 919 481 3175
                                                                                        61 CVRCKPTKSARSIRAQRHTDMPKTQK
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COMPUTER READABLE FORM:
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NUMBER OF SEQUENCES:
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Matches 77; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-989-251-41
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STATE: N
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MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYTEM: IBM P.C. DOS 5.0
SOFTWARE: FASTSEQ for Windows 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/460,890A
FILING DATE: June 5, 1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: 08/167,641
FILING DATE: March 19, 1993
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
NAME: Warburg, Richard J.
NAME: Warburg, Richard J.
REGISTRATION NUMBER: 212/066
TELEFAX: 67-3510
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
LENGTH: 78 amino acids

"""".
                                                                                                                                                                                                                                                  COUNTRY: U.S.A.
ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth
STREET: Suite 4700
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                                                                                                                                                        CITY: Los Angeles
STATE: California
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CITY: Los Angeles
STATE: California
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US-08-167-641C-47
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                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Tekamp-olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
TITLE OF INVENTION: PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
ADDRESSEE: 8ell Sellzer IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Suite 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 47, Application US/08460890A
Patent No. 5994109
GENERAL INFORMATION:
APPLICANT: Woo, Savio L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Gristiano, Richard J.
APPLICANT: Gottchalk, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
AURIZATION NUMBER: US/09/528,108 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Raleigh
STATE: NC
COUNTRY: US
ZIP: 27622
COMPUTER READABLE FORM:
MEDIUM TYPE: Eloppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/989,251
FILING DATE: NPORMATION:
NAME: SPIULIN, W. MUTRAY
REGISTRATION NUMBER: 32,943
REFERENCE/OMCKET NUMBER: 5784-4
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919 420 2202
TELEPRAX: 919 881 3175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 CVRCKPTKSA-RSIRAQRHTDMPKTQK 86
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Patent No. 6312923
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INFORMATION FOR SEQ ID NO: 41:
SEQUENCE CHARACTERISTICS:
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Best Local Similarity 89...
The conservative 78; Conservative ...
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
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4 TLCGAELVDALOFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMYCVR 63
                                                                                                                                                                            2 TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAP 61
                                                                             ó
                          Length 78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: WOO, Savio L.C.
APPLICANT: Woo, Savio L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gritchalk, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
CORRESPONDENCE: 65
CORRESPONDENCE: 65
Score 367; DB 2; Length /e, Pred. No. 3.9e-35;
                                                                          3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 47, Application US/08167641C Patent No. 6033884 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
                     Query Match 61.3%;
Best Local Similarity 87.0%;
Matches 67; Conservative
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APPLICATION NUMBER:

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4 TLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMYCVR 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TLGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAP 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 78;
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APPLICANT: Woo', Savio L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gottchank, Stephen
TITLE OF INVENTION: WUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Lyon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 367; DB 4;
Pred. No. 3.9e-35;
3; Mismatches 7
                                                           PRIOR APPLICATION 18.43

PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/167,641
FILING DATE: December 14, 1993
APPLICATION NUMBER: 07/855,389
FILING DATE: MATCH 20, 1993
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: MATCH 19, 1993
ATTORNEY/AGENT INFORMATION:
NAME: WAIDLIG, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 212/063
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
  US/08/460,971A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/462,040 FILING DATE: June 5, 1995 CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM COMPATIBLE OPERATING SYSTEM: IBM P.C. DOS 5.0 SOFTWARE: FastSEQ for Windows 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: Lyon & Lyon STREET: STREET: Suite 4700 CITY: Los Angeles STATE: California COUNTRY: U.S. A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 47, Application US/08462040 Patent No. 6177554
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December 14, 1993
                                                                                                                                                                                                                                                                                                                                           TELEPHONE: (213) 489-1600
TELERAX: (213) 955-0440
TELEX: 67-3510
INPORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
LENGHH: 78 amino acids
TYPE: amino acid
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61.3%;
87.0%;
                     FILING DATE: June 5, 1995
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 87.0%
Matches 67; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-460-971A-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: U.S.A.
ZIP: 90071-2066
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US-08-462-040-47
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Pred. No. 3.9e-35;
3; Mismatches 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: Woo, Savio L.C.
APPLICANT: Smith, Louis C.
APPLICANT: Cristiano, Richard J.
APPLICANT: Gottchalk, Stephen
TITLE OF INVENTION: NUCLEIC ACID TRANSPORTER SYSTEMS AND
TITLE OF INVENTION: METHODS OF USE
NUMBER OF SEQUENCES: 65
CORRESPONDENCE ADDRESS:
COMPUTER READBLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: $15" Diskette, 1.44 Mb
COMPUTER: IBM COMPATIBLE
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FASTSEQ for Windows 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/167,641C
FILING DATE: December 14, 1993
CLASSIFCATION ATA:
APPLICATION NUMBER: 07/855,389
FILING DATE: MARCh 19, 1993
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: MARCh 19, 1993
ATORNEY AGENT INFORMATION:
NAME: Warburg Richard J.
RECISTRATION NUMBER: 205/012
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFAX: (213) 955-0440
TELEFAX: (213) 955-0440
TELEFAX: (213) 489-1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OPERATING SYSTEM: IBM P.C. DOS 5.0 SOFTWARE: FASLSEQ for Windows 2.0 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-460-971A-47
; Sequence 47, Application US/08460971A
; Patent No. 6150168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61.3%;
87.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 78 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 61.37
Best Local Similarity 87.07
Matches 67; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           64 CKPTKSARSIRAQRHTD 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear
MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-167-641C-47
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 TLGGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMYCAP 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:

APPLICANT: CHEN, Thomas T
APPLICANT: SHAMBLOTT, Michael J
TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED
TITLE OF INVENTION: FROM RAINBOW TROUT
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
ADDRESSEE: Burns, Doane, Swecker & Mathis
STREET: George Mason Bldg., Washington & Prince Sts.
CITY: Alexandria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 367; DB 4; Length 78 Pred. No. 3.9e-35; 3; Mismatches 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/953,230A
FILING DATE: 30-SEP-1992
CLASSIFICATION: 435
ATONNEY/AGENT INFORMATION:
NAME: Crane-Feury, Sharon E
REGISTRATION NUMBER: 36,113
REFERENCE/POCKET NUMBER: 028755-010
TELECOMMULCATION INFORMATION:
TELECOMMULCATION INFORMATION:
TELECOMMULCATION: (703) 836-6620
APPLICATION NUMBER: 07/855,389
FILING DATE: MArch 20, 1992
APPLICATION NUMBER: PCT/US93/02725
FILING DATE: March 19, 1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 9, Application US/07953230A Patent No. 5476779
                                                                                                     NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 212/(
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 955-0440
TELEX: (7-3510
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 176 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 61.3%;
Best Local Similarity 87.0%;
Matches 67; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 22313-1404
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (703) 836-2021 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STATE: Virginia
COUNTRY: United States
ZIP: 22313-1404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              64 CKPTKSARSIRAQRHTD 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        78 amino acids
                                                                                                                                                                                                                                                                                                                                 TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: linear
MOLECULE TYPE: peptide
-08-462-040-47
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US-07-953-230A-9
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us-09-852-261-4.rpr

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October 25, 2002, 15:55:02; Search time 12.7048 Seconds (without alignments) 839.517 Million cell updates/sec
5.1.3
Compugen Ltd.
   version 5 - 2002 (
                                                                          OM protein - protein search, using sw model
 GenCore
Copyright (c) 1993
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US-09-852-261-4 Perfect score: Title:

1 GPETLCGAELVDALQFVCGP......THKKRKLQRRRKGSTLEEHK 111 Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

283138 seqs, 96089334 residues rched:

283138 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000.

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR_71:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	insulin-like growt	insulin-like growt	in-like	in-like	in-like	insulin-like growt	in-like	insulin-like growt	insulin-like growt	insulin-like growt	. "insulin-like growt	insulin-like growt	-like	-like	ike	insulin-like growt	in-1	insulin-like growt	insulin-like growt	insulin-like growt	in-like	in-like	in-like	insulin-like growt	insulin-like growt				
SUMMARIES	ΩI	A40912	A26859	A27804	B40912	IGHU1B	B27804	A25540	IGGP1	A36552	IGHU1	JC2483	PN0622	IGBO1	S12825	S22878	A33390	A41399	A36079	C54270	C44012	A41396	A54270	B54270	D54270	A46244	æ	A53697	B46244	IGB02
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	Query Match Length		159	181	127	195	153	127	137	137	153	154	122	153	153	138	154	153	153	161	155	176	188	188	149	176	126	193	214	155
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	Score	9	7	536	464	464	443	440	423	423	423	423	418	418	418	410	410	3	376.5	62	361	361	361	361	360	359	279.5	279	249	233
	Result No.		7	3	4	ស	9	7	00	O	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29

insulin-like growt insulin-like growt	insulin-like growt insulin-like growt	insulin-like growt insulin-like growt	<pre>insulin-like growt insulin-like growt insulin-like growt</pre>	insulin-like growt insulin-like growt	insulin-like growt insulin-like growt insulin - shorthor
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S04858 T10897	A36612 B60738 IGHU2	157671 153642	A24913 167610 IGRT2	S66484 I51240	A60740 A34049 INFIS
000	7 77 77	4 14 14	224	0.0	777
179	181	128 128 93	180 183 180	210	66 44 50
38.7	37.1	36.1 35.9	35.4 35.3 35.0	34.1	30.2 26.5 25.5
232	222 221 221	216	212 211.5 209.5	204	181 159 152.5
30	0 6 6 6 4 6 4 7	36 37	38 39 40	41	44 45

ALIGNMENTS

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Accession: 11ke growth factor IB precursor - rat
C; Species: Rattus norvegicus (Norway rat)
C; Date: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change 16-Jul-1999
R; Shimatsu, A.; Rotwein, P.
Nucleic Acids Res. 15, 7196, 1987
Nucleic Acids Res. 15, 7196, 1987
A; Recession: A26859
A; Molecule type: mRNA
A; Residues: 1-159 < CSHN
A; Residues: 1-159 < CSHN
A; Cstoss-references: GB: X06107; GB: M32250; GB: Y00429; NID: g56424; PIDN: CAA29480.1; PID
C; Superfamily: insulin
C; Keywords: alternative splicing; growth factor
Average services and the growth factor I precursor form 1 - rat
C; Species: Rattus norvegicus (Norway rat)
C; Species: Rattus norvegicus (Norway rat)
C; Species: 28-Feb-1992 #sequence_revision 28-Feb-1992 #text_change 16-Jul-1999
C; Accession: A40912
R; Roberts Jr., C.T.; Lasky, S.R.; Lowe Jr., W.L.; Seaman, W.T.; LeRoith, D.
Mol. Endocrinol. 1, 243-248, 1987
Mol. Endocrinol. 1, 243-248, 1987
C tissues.
A; Reference number: A40912; MUID:88288198
A; Accession: A40912
A; Accession: A40912
A; Accession: A40912
A; Molcule type: mRNA
A; Cross-references: GB:M15480; NID:g204749; PIDN:AAA41385.1; PID:g204750
C; Superfamily: insulin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98.8%; Score 592; DB 2; Length 133; 99.1%; Pred. No. 7.2e-53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 571; DB 2; Length 159;
Pred. No. 1.1e-50;
0; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
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Best Local Similarity 96.4%;
Matches 107; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 110; Conservative
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Best Local Similarity
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Gaps

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A.Cross references: GB.MID568; NID:g183111; PIDN:AAA52539.1; PID:g183112
R; Sandberg Nordqvist, A.C.; Stahlbom, P.A.; Lake, M.; Sara, V.R.
submitted to the EMBL Data Library, November 1990
A; Description: Nucleotide sequence of the human fetal brain IGF-1b.
A; Reference number: S30540
A; Reference number: S30540
A; Residues: 1-195 < SAN>
A; Residues: 1-195 < SAN>
A; Residues: 1-195 < SAN>
A; Cross-references: EMBL:X56774; NID:g32991; PIDN:CAA40093.1; PID:g32992
B; Sandberg-Nordqvist, A.C.; Stahlbom, P.A.; Reinecke, M.; Collins, V.P.; von Holst, H
A; Ritle: Characterization of insulin-like growth factor 1 in human primary brain tumo
A; Reference number: A48960; MUID:93265440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A. Cross-references: GB.X56774; GB.S61860; NID:932991; PIDN:CAA40093.1; PID:932992.
A. Experimental source: anaplastic oligodendroglioma
A. Note: sequence modified after extraction from NCBI backbone
A. Note: the authors translated the codon CAG for residues 124 and 133 as Glu
A. Note: sequence extracted from NCBI backbone (NCBIN:133058)
A. Stille: A mitogenic peptide amide encoded within the E peptide domain of the insulin A. Rochence innuber: AAZ664; MUDID:92390398
A. Stille: A mitogenic peptide amide encoded within the E peptide domain of the insulin A. Contents: annotation; IBB-1: amidated carboxyl end
C. Comment: For an alternative splice form, see PIR:IGHUI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Accession: A01611
A; Molecule type: DNA
A; Residues: 1-195 <ROTI>
A; Costaldues: 1-195 <ROTI>
A; Costaldues: 1-195 <ROTI>
A; Costaldues: 1-195 <ROTI>
A; Cross-references: GB:M14155; NID:g183106; PIDN:AAA52537.1; PID:g183109
B; Rotwein, P.
Proc. Natl. Acad. Sci. U.S.A. 83, 77-81, 1986
A; Title: Two insulin-like growth factor I messenger RNAs are expressed in human liver
A; Reference number: A26181; MUID:86094355
A; Accession: A26181
                                                                                                                                                                                                                                                                                                                                                                                                                           C;Species: Homo sapiens (man)
C;bacte: 30-un-1987 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000
C;bactes: 30-un-1987 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000
C;Accession: A01611; A26181; S30540; B48960; A42664
R;Rotwein, P.; Pollock, K.M.; Didder, D.K.; Krivi, G.G.
J;Bold. Chem. 201, 4828-4832, 1986
A;Fitle: Organization and sequence of the human insulin-like growth factor I gene.
A;Reference number: A92581; MUID:86168194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   F.1-21/Domain: signal sequence #status predicted <SIG>
F.2-48/Domain: propeptide #status predicted <PRO>
F.49-118/Product: insulin-like growth factor I #status predicted <MAT>
F.49-71/Domain: insulin chain B-like #status predicted <CHB>
F.78-99/Domain: insulin chain B-like #status predicted <CHB>
F.78-99/Domain: insulin connecting C peptide-like #status predicted <CHC>
F.90-110/Domain: insulin chain B-like #status predicted <CHB>
F.111-118/Domain: Deptide #status predicted <CHD>
F.111-118/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CHE>
F.111-172/Product: insulin-like growth factor IB-El amide #status predicted <MA2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Map position: 12q22-12q24.1
A;Introns: 21/3; 74/1; 134/3
C;Superfamily: insulin
C;Keywords: alternative splicing; amidated carboxyl end; growth factor; plasma
       82
                                                                                                                                                                                                                                                                                                                           splice form B [validated] - human
   23 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                       insulin-like growth factor I precursor, splice form
N;Alternate names: IGF-IB; somatomedin C
N;Contains: insulin-like growth factor IB-El amide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Cross-references: GDB:120081; OMIM:147440
                                                                                                              A; Molecule type: mRNA
A; Residues: 1-195 <ROT2>
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A;Molecule type: mRNA
A;Residues: 1-195 <SA2>
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C;Date: 28 Feb-1992 #sequence_revision 28 Feb-1992 #text_change 16-Jul-1999
C;Accession: B40912
R;Roberts Jr., C.T.: Lasky, S.R.; Lowe Jr., W.L.; Seaman, W.T.; LeRoith, D.
Mol. Endocrinol. 1, 243-248, 1987
A;Title: Molecular cloning of rat insulin-like growth factor I complementary deoxyribonu
                                                                                                                                                                                                                                                                                                                                                                                  insulin-like growth factor I precursor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 09-Jun-1988 #sequence_revision 09-Jun-1988 #text_change 16-Jul-1999
C;Accession: A27804; 165202
R;Shimatsu, A.; Rotwein, P.
A; Shimatsu, A.; Rotwein, P.
A;Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence, A;Reference number: A27804; MUID:87222423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |Residues: 1-181 <SH1>
|Cross-references: GB:M15650; GB:J02743; NID:g204296; PIDN:AAA41214.1; PID:g204299
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: GB:M17594; NID:g204759; PIDN:AAA41390.1; PID:g204760
C;Superfamily: insulin
C;Keywords: alternative splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: GB:M15481; NID:g204753; PIDN:AAA41387.1; PID:g204754 C;Superfamily: insulin
                                    49 GPETLCGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
   1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Biochem. Biophys. Res. Commun. 146, 1154-1159, 1987
A;Title: Ret IGF-T cDNA's contain multiple 5'-untranslated regions. A;Reference number: 152218; MUID:8729853
A;Accession: 165202
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-27 <RES.
                                                                                                                                                                                109 CAPLKPTKSARSIRAQRHIDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK 159
                                                                                                                                           CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRKKGSTLEEHK 111
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Pred. No. 6.5e-40;
0; Mismatches 1; Indels
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94.3%;
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98.8%;
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Best Local Similarity
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Residues: 1-181 <SHI>
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A; Residues: 1-127 <ROB>
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A; Status: preliminary
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1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
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95.38;
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Best Local Similarity 94.2%
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Best Local Similarity 95.33
Matches 82; Conservative
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C; Date: 16-Mar-1989 #sequence_revision 16-Mar-1989 #text_change 21-Jul-2000
C; Date: 16-Mar-1989 #sequence_revision 16-Mar-1989 #text_change 21-Jul-2000
C; Date: 16-Mar-1989 #sequence_revision 16-Mar-1989 #text_change 21-Jul-2000
C; Date: 16-Mar-1989 #sequence_revision 16-Mar-1989
R; Shimatsu, A.; Rotwein, P.
J; Biol. Chem. 262, 7894-7900, 1987
A; Title: Mosalce evolution of the insulin-like growth factors. Organization, sequence, and A; Reference number: A27804; MUID: 87222423
A; Rocession: B27804
A; Molecule type: DNA
A; Residues: 1-153 <SHI>
A; Cross-references: GB:MI5551; GB:J02743; NID:q204297; PIDN:AAA41215.1; PID:q204300
B; Casella, S.J.; Smith, E.P.; Van Wyk, J.J.; Joseph, D.R.; Hynes, M.A.; Hoyt, E.C.; Lund DNA 6, 325-330, 1987
A; Title: Isolation of rat testis CDNAs encoding an insulin-like growth factor I precursc A; Reference number: A27849; MUID:88003970
A; Molecule type: mRNA
A; Residues: 27-153 <CAS>
A; Cross-references: GB:MI7335; NID:q204751; PIDN:AAA41386.1; PID:q204752
B; Kato, H.; Okoshi, A.; Miura, Y.; Noquchi, T.
Agric. Biol. Chem. 54, 1599-1601, 1990
A; Title: A new CDNA clone relating to larger molecular species of rat insulin-like growt A; A; Reference mumber: JH0133; MUID:9103966
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A; Residues: 46-153 < MRR>
A; Cross-references: GB:MI7714; NID:g204324; PIDN:AAA41227.1; PID:g204325
B; Kato, H.; Takenaka, A.; Miura, Y.; Nishiyama, M.; Noguchi, Ţ.
Agric. Biol. Chem. 54, 2225-2230, 1990
A; Aitle: Evidence of introduction by molecular cloning of artificial inverted sequence a A; Reference number: JN0088; MUID:91136779
A; Rocession: JN0088
A; MUID:91136779
A; Residues: "MSAPP', 22-153 < KA2>
A; Residues: "MSAPP', 22-153 < KA2>
A; Residues: "MSAPP', 22-153 < KA2>
A; Rote: the authors present evidence that this mRNA may contain an artifactual inversion B; Tamura, K.; Kobayashi, M.; Ishii, Y.; Tamura, T.; Hashimoto, K.; Nakamura, S.; Niwa, M.; Biol. Chem. 264, 5616-5621, 1989
A; Title: Primary structure of rat insuln like growth factor-I and its biological activity.
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F;54-96,66-109,95-100/Disulfide bonds: #status predicted F;172/Modified site: amidated carboxyl end (Arg) (amide in mature form from following
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                                                                                                           Length 195;
                                                                                                        Query Match
77.5%; Score 464; DB 1; Length 19:
Best Local Similarity 85.3%; Pred. No. 9.5e-40;
Matches 87; Conservative 3; Mismatches 12; Indels
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posidues: 27-153 <ARA>
CSSIDOS: 27-153 <ARA
TOSSIDOS: 38:D00698; NID:9220780; PIDN:BAA00604.1;
TOSSIDOS CONTROL SOURCE: liver
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A;Title: Identification, characterization, and regulation A;Reference number: A28504; MUID:87246437
                                                                                                                                                                                                                                                                                                                                                                                                                            CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRR 102
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A; Residues: 49-118 <TAM>
R; Canalis, E.; McCarthy, T.; Centrella, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alternate names: IGF-IA; somatomedin C Species: Rattus norvegicus (Norway rat)
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A; Accession: A32857
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A; Wolecule type: mRNA
A; Residues: 1-127 <BELD
A; Residues: 1-127 <BELD
A; Residues: 1-127 <BELD
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A; Val
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Endocrinology 122, 22-27, 1988
A;Title: Isolation and characterization of insulin-like growth factor I (somatomedin-A;Title: Isolation and characterization of insulin-like growth factor I (somatomedin-A;Reference number: A61096; MUID:88082445
A;Accession: A61096
A;Molecule type: protein
A;Residues: 49-53, X', 55-65 <CAN>
C;Superfamily: insulin
C;Keywords: alternative splicing; growth factor
F;49-118/Product: insulin-like growth factor I #status experimental <ILG>
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C;Superfamily: insulin
C;Superfamily: insulin
C;Superfamily: splicing; growth factor
C;Superfamily: signal sequence #status predicted <SIG>
F;23-127/Domain: signal sequence #status predicted <DOB>
F;23-127/Promain: insulin chain B-like #status predicted <DOB>
F;23-52/Domain: insulin chain B-like #status predicted <DOB>
F;64-84/Domain: insulin chain A-like #status predicted <DOB>
F;64-87/Domain: D peptide #status predicted <DOB>
F;85-92/Domain: D peptide #status predicted <DOB>
F;93-127/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>
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C;Species: Mus musculus (house mouse)
C;Date: 30-Jun-1988 #sequence_revision 30-Jun-1988 #text_change 16-Jul-1999
C;Accession: A25540; 155295; IS9090; B25540
R;Bell, G.I.; Stemplen, M.M.; Pong, N.M.; Rall, L.B.
Nucleic Acids Res. 14, 7873-7882, 1986
A;Title: Sequences of liver cDNAs encoding two different mouse insulin-like A;Reference number: A93643; MUID:87040760
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A;Residues: 49-108 <RE2>
A;Cross-references: GB:M14983; NID:g194495; PIDN:AAA37925.1; PID:g194496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIDN: AAA74553.1; PID:g550489
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1.7e-37;
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Pred. No. 1e-37;
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A; Residues: 49-108 < RES>
A; Cross-references: GB:M28139; NID:g341835; PIDN:A
Cross-references: GB:M28139; NID:g341835; PIDN:A
B; Mathews, L.S.; Norstedt, G.; Palmiter, R.D.
Proc. Natl. Acad. Sci. U.S.A. 83, 9343-9347, 1986
A; Title: Regulation of insulin-like growth factor
A; Reference number: I59090; WIID:87092249
A; Accession: I59090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
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Pred. No. 1
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us-09-852-261-4.rpr

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A; Molecule type: protein
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A; Residues: 1-153 <ROT>
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A; Molecule type: mRNA
A; Residues: 1-153 <STE>
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A; Residues: 1-153 <LEB>
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                                                                                    RESULT 10
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Date: 12-Apr-1991 #sequence_revision 12-Apr-1991 #text_change 16-Jul-1999
Date: 12-Apr-1991 #sequence_revision 12-Apr-1991 #text_change 16-Jul-1999
S. Tobin, G.; Yee, D.; Bruenner, N.; Rotwein, P.
Mol. Endocrinol. 4, 1914-1920, 1990
Mol. Endocrinol. 5, Rotwein, Factor I messenger RNA is expressed in normal A; Reference number: A36552; MuID:91187000
A; Status: preliminary
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                                                                                                                                                                                                                          C;Species: Cavia porcellus (guinea pig)
C;Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 07-Nov-1997
C;Accession: S12719
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Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      33 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: GB:M37484; NID:g184833; PIDN:AAA52789.1; PID:g184834 C;Superfamily: insulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
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                                                                                                                                                                                                                                                                                                                                                                                     A;Molecule type: mRNA
A;Residues: 1-137 <BEL>
A;Resicues: 1-137 <BEL>
A;Cross-references: EMBL:X52951
Note: it is uncertain whether Met-1 or Met-8 is the initiator Superfamily: insulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 137;
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                                                                                                                                                                                                                                                                                   R;Bell, G.I.; Stemplen, M.M.; Fong, N.M.; Seino, S. Nucleic Acids Res. 18, 4275, 1990
A;Title: Sequence of a cDNA encoding guinea pig IGF-I. A;Reference number: S12719; WUID:90332447
A;Reference number: S12719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 423; DB 2; I
Pred. No. 9.9e-36;
1; Mismatches 7;
                                                                                                                                                                                                         - guinea pig
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                                                                                  61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
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                                                                                                                                                                                                     insulin-like growth factor I precursor
                                                           61 CVRCKPTKSARSIRAQRHTDMPKTQK
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Matches 78; Conservative
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A; Residues: 1-137 <TOB>
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tes 78; Conserv
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Matches
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A;Cross-recenteds: GB:M27544; NID:g184829; PIDN:AAA52787.1; PID:g306927
R;Rinderknecht, E.; Humbel, R.E.
J. Biol. Chem. 253, 2769-2776, 1978
A;Title: The amino acid sequence of human insulin-like growth factor I and its struct A;Reference number: A92226; MUID:78130171
A;Accession: A92226
A;Accession: A92226
A;Accession: A92226
B;Karey, K.P.; Marquardt, H.; Sirbasku, D.A.
Blood 74, 1084-1092, 1989
A;Title: Human platelet-derived mitogens. Identification of insulinlike growth factor A;Reference number: A60483; MUID:89323462
A;Accession: A60483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 24-153 - DBE>
A; Cross-references: GB:X03420; GB:X00362; NID:g33020; PIDN:CAA27152.1; PID:g33021; GB
A; Jansen, M.; van Schaik, F.M.A.; Ricker, A.T.; Bullock, B.; Woods, D.E.; Gabbay, K.H
Nature: 306, 609-611, 1983
A; Title: Sequence of CDNA encoding human insulin-like growth factor I precursor.
A; Reference number: A93321; MUID:84068210
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                                                                                                                                                                                                                                                               insulin-like growth factor I precursor, splice form A [validated] - human N.Alternate names: IGF-I long splice form precursor; IGF-IA; somatomedin C C; Species: Homo sapinas (man) C: Date: 24-Apr-1984 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000 C; Accession: A92581; A23614; A93321; JT0571; A23622; A92226; A60483; S30519; A48960; R; Rotwein, P.; Pollock, K.M.; Didier, D.K.; Krivi, G.G. Biol. Chem. 261, 4828-4832, 1986 A; Title: Organization and sequence of the human insulin-like growth factor I gene. A A; Reference number: A92581; MUID:86168194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: mRNA
A; Residues: 1-153 CANA>
A; Cross. references: GB: X00173; NID: g33015; PIDN: CAA24998.1; PID: g33016
A; Note: Met. 24 is proposed as a likely initiator
R; Steenbergh, P.H.; Koonen-Reemst, A.M.C.B.; Cleutjens, C.B.J.M.; Sussenbach, J.S.
Biochem. Biophys. Res. Commun. 175, 507-514, 1991
A; Title: Complete nucleotide sequence of the high molecular weight human IGF-I mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    G.J.B.;
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R;de Pagter-Holthuizen, P.; van Schaik, F.M.A.; Verduijn, G.M.; van Ommen, G.J.B.;
FEBS Lett. 195, 179-1184, 1986
A;Title: Organization of the human genes for insulin-like growth factors I and II.
A;Reference number: A91356; MUID:86108862
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A; Experimental source: platelet lysate
R; Nordqvist Sandberg, A.C.; Stahlbom, P.A.; Lake, M.; Sara, V.R.
submitted to the EMBL Data Library, November 1990
A; Description: Nucleotide sequence of the human fetal brain IGF-la.
A; Reference number: $30519
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A; Status: preliminary

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A; Title: Nucleotide sequence of the bovine insulin-like growth factor 1 (IGF-1) and A; Reference number: S12672; MUID:90175014
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F;20-89/Product: insulin-like growth factor Ia (fragment) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C:Species: Bos primigenius taurus (cattle)
C:Date: 31-Mar-1988 #sequence_revision 28-Apr-1995 #text_change 18-Jun-1999
C:Accession: $12672; A25623; $500465
R:Fotsis, T.; Murphy, C.; Gannon, F.
Nucleic Acids Res. 18, 676, 1990
                                                                                                                                                                                                                                                                          50 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109
                                                                                                                                                                                                                                        1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
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A;Residues: 49-118 <HON>
R;Francis, G.L.; Upton, F.M.; Ballard, F.J.; McNeil, K.A.; Wallace, J.C.
             F;50-119/Product: insulin-like growth factor-I #status predicted <MAT>F;120-154/Region: E domain
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A;Residues: 1-153 <FOT>
A;Cross-references: EMBL:X15726; NID:9454; PIDN:CAA33746.1; PID:9455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            insulin-like growth factor Ia precursor - dog (fragment)
C;Species: Canis lupus familiaris (dog)
C;Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Residues: 1-122 <DEL> C;Comment: This protein is a potent inducer of DNA synthesis in \texttt{C};\texttt{Comment}:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    insulin-like growth factor IA precursor - bovine (fragment)
                                                                                                       Score 423; DB 2; I
Pred. No. 1.1e-35;
1; Mismatches 7;
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Pred. No. 2.8e-35;
1; Mismatches 8;
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J. Biol. Chem. 261, 569-575, 1986
A;Tille: Insulin-like growth factors I and
A;Reference number: A92585; MUID:86085881
A;Accession: A25623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             encoding dog MUID:93366192
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
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                                                                                                          70.68;
90.78;
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89.5%;
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                                                                            Query Match
Best Local Similarity
The 78; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
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C;Keywords: growth fact
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gene 130, 305-306,
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A; Molecule type: mRNA
A; Residues: 1-153 < NRS-
A; Cross-references: EMBL:X56773; NID:g32989; PIDN:CAA40092.1; PID:g32990
R; Sandberg-Nordgyist, A.C.; Stahlbom, P.A.; Reinecke, M.; Collins, V.P.; von Holst, H.;
Cancer Res. 53, 2475-2478, 1993
A; Title: Characterization of insulin-like growth factor 1 in human primary brain tumors.
A; Reference number: A48960; MUID:93265440
A; Accession: A48960; MUID:93265440
A; Molecule type: mRNA
A; Residues: 1-123, 'E', 125-132, 'E', 134-153 < SAN>
A; Cross-references: GB:X56773; GB:S61841; NID:g32989
A; Experimental source: anaplastic oligodendroglioma
A; Note: sequence extracted from NCB1 backbone (NCBIN:133056, NCBIP:133057)
A; Note: sequence inconsistent with the nucleotide translation
B; Rall, L.B.; Scott, J; Bell, G.I.
Meth. Enzymol. 146, 239-248, 1987
A; Title: Human insulin-like growth factor I and II messenger RNA: isolation of complement elecation: 157044; MUID:88065102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Procession: 197947

A Molecule type: mRNA

C Comment: The insulin-like growth factors, isolated from plasma, are structurally and for comment: For an alternative splice form, see PIR:IGHUIB.

C C Genetics:

A Gene: GDB:IGF1

A Molecule type: mRN:147440

A Map position: 12q22-12q24.1

A Introns: 21/3; 74/1; 134/3

C Superfamily: insulin

C Keywords: alternative splicing; growth factor; plasma

C Keywords: alternative splicing; growth factor; plasma

C Keywords: alternative splicing; growth factor; plasma

C Keywords: alternative splicing; growth factor i #status experimental CHB>

F; 1-21/Domain: insulin chain B-like #status experimental CHB>

F; 78-89/Domain: insulin connecting C peptide-like #status experimental CHB>

F; 78-89/Domain: insulin chain B-like #status experimental CHB>

F; 78-89/Domain: D peptide #status experimental CHB>

F; 111-118/Domain: D peptide #status experimental CHB>

F; 111-118/Domain: carboxy1-terminal propeptide (E peptide)

F; 54-96, 66-109, 95-100/Disulfide bonds: #status predicted
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C;Date: 16-Mar-1995 #sequence_revision 26-May-1995 #text_change 17-Mar-1999
C;Accession: UC2483
R;Mikawa, S.; Yoshikawa, G.; Aoki, H.; Yamano, Y.; Sakai, H.; Komano, T.
Biosoi. Biotechnol. Biochem. 59, 87-92, 1995
A;Title: Dynamic aspects in the expression of the goat insulin-like growth factor-1A;Reference number: UC2483; MUID:95201385
A;Molecule type: mRNA
A;Residues: 1-154 <MIK>
A;Cross-references: GB:S11378; DDBJ:D26116; DDBJ:D26117; DDBJ:D26118; DDBJ:D26119
C;Genetics:
A;Introns: 21/3; 75/1; 135/3
C;Superfamily: insulin
F;1-49/Domain: signal sequence #status predicted <SIG>
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Pred. No. 1.1e-35;
1; Mismatches 7; Indels
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90.7%;
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multiple cell types,

07-May-1999

insulin-like growth

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us-09-852-261-4.rpr

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Gaps 9

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Indels

Score 418; DB 2; L Pred. No. 3.5e-35; 1; Mismatches 8;

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Size of the state 
                                                                Ajntrons: 21/3; 74/1., C; Superfamily: insulin C; Superfamily: insulin C; Superfamily: insulin C; Superfamily: insulin factor F; 1-22/Domain: signal sequence #status predicted <SIG> F; 23-48/Domain: propeptide #status predicted <PRO> F; 23-48/Domain: propeptide #status gredicted <PRO> F; 49-153/Product: insulin-like growth factor IA #status experimental <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
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88.4%; Pred. No. 2.1e-34;
ive 1; Mismatches 9;
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                                                                                                                                                                                                                                                                                                                                                                              / Match 69.8%;
Local Similarity 89.5%;
les 77; Conservative
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Biochem. J. 251, 95-103, 1988

A;Title: Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences and biologic A;Reference number: $00465; MUD:88268820

A;Accession: $00465

A;Accession: $00466

A;Accession: $0
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C; Species: Sus scrofa domestica (domestic pig)
C; Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 16-Jul-1999
C; Accession: S12825; S21488; A34938; A60738
R; Mueller, M.; Brem, G.
Nucleic Acids Res. 18, 364, 1990
A; Title: Nucleotide sequence of porcine insulin-like growth factor I: 5' untranslated re
A; Reference number: S12825; MUID:90221822
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A; Molecule type: mRNA
A; Molecule type: mRNA
A; Molecule type: mRNA
A; Residues: 'Y', 21-153 -TAV>
A; Cross-references: G: M31175
B; Francis, G.L.; Owens, P.C.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.
A; Endocrinol. 122, 681-687, 1989
A; Title: Purification, amino acid sequences and assay cross-reactivities of porcine insu
A; Reference number: A60738; MUID:90039035
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A.Residues: 1-153 <MUE>
A.Cross-references: EMBL:X52388
R.Dickson, M.C.; Huskisson, N.S.; Gilmour, R.S.
Description: Porcine Insulin-like growth factor gene: sequence of exon and M.Reference number: S21488
A.Accession: S21488
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R;Tavakkol, A.; Simmen, F.A.; Simmen, R.C.M.
Mol. Endocrinol. 2, 674-681, 1988
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Pred. No. 3.5e-35;
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89.5%;
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Matches 77; Conservative
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A; Residues: 49-117,'X' <FRA>
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A; Residues: 1-21 <DIC>
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Length 138;

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OM protein - protein search, using sw model

October 25, 2002, 15:52:51; Search time 6.68675 Seconds (without alignments) 642.745 Million cell updates/sec Run on:

Title: Perfect score: Sequence:

US-09-852-261-4 599 1 GPETLCGAELVDALQFVCGP.....THKKRKLQRRRKGSTLEEHK 111

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

105224 seqs, 38719550 residues rched:

Total number of hits satisfying chosen parameters:

105224

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_40:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	8 mus		Q95222 oryctolagus	σ.	P08025 rattus norv	P05017 mus musculu	7 cavia	3 homo s	7 capra	P33712 canis famil	-	'n	S	2 coturnix	gallus g	_	~		Q90326 cyprinus ca			P51458 equus cabal	Q02816 oncorhynchu	P07456 bos taurus	P10764 ovis aries	P51459 equus cabal	518		594	34	27	33	P01346 rattus norv
SUMMARIES	ID	IGFB_MOUSE	IGFB_RAT	IGF1_RABIT	IGFB_HUMAN	IGFA_RAT	IGFA_MOUSE	IGF1_CAVPO	IGFA_HUMAN	IGF1_CAPHI	IGF1_CANFA	IGF1_PIG	IGF1_BOVIN	IGF1_SHEEP	IGF1_COTJA	IGF1_CHICK	IGF1_XENLA	IGF1_SUNMU	IGFA_CYPCA	IGFB_CYPCA	IGF1_ONCKI	IGF1_ONCMY	IGF1_HORSE	IGF2_ONCMY	IGF2_BOVIN	IGF2_SHEEP	IGF2_HORSE	IGF_MYXGL	IGF2_PIG	IGF2_MUSVI	IGF2_HUMAN	IGF2_CAVPO	IGF2_MOUSE	IGF2_RAT
	Length DB	33	81	43	95	53	27	130 1	53	54	22	53	54	54	24	53		81	61	61		9/	22	14	55	79	81	39	81	29	80	128 1	80	
di	Query Match	9.68	89.5	85.5	77.5	74.0	73.5	9.07	9.07	9.07	8.69	8.69	8.69	68.4	64.1	64.1	62.9	61.6	60.4	60.4	60.3	59.9	59.8	41.6	38.9	38.7	37.4	37.2	37.1	37.0	36.9	36.1	2	35.0
	Score	537	536	512	464	443	440	423	423	423	418	418	418	410	384		376.5	369	362	362	361	359	358	249	233	232	224	223	222	221.5	221	216	212	209.5
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P33717 gallus gall	P01336 gadus calla P09536 hydrolagus	P01337 batrachoidi P01338 batrachoidi	P12708 zaocys dhum	P07454 anser anser	P01334 crotalus at	P01327 chinchilla	P31887 trachemys s
IGF2_CHICK INS MYOSC	INS_GADCA INS_HYDCO	INS1_BATSP INS2_BATSP	INS_ZAODH	INS_ANSAN	INS_CROAT	INS_CHIBR	INS_TRASC
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50	51	51 50	51	51	51	51	21
33.9	25.3	24.8 · 24.5	24.4	23.9	23.9	23.7	23.7
203	151.5	148.5 147	146	143	143	142	142
34 35	36	დ ტ რ	40	42	43	44	45

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Matches 100;
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IGF1_RABIT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-!- SUBSCELLULAR LOCATION: Secreted.
-!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; ISOFORM IGF-IA (AC P08025) AND
-!- SISOFORM IGF-IB (SHOWN HERE); ARE PRODUCED BY ALTERNATIVE SPLICING.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chórdata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                           1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                  23 GPETICGAELVDALQFVCGPRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-89174609; PubMed-2538424;
Tamura K., Kobayashi M., Tshii Y., Tamura T., Hashimoto K.,
Nakamura S., Niwa M., Zapf J.;
Primary structure of rat insulin-like growth factor-I and its
biological activities.";
J. Biol. Chem. 264:5616-5621(1989).
-I- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-89127259; PubMed*3221878; Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Leroith D.; "Structure of the rat insulin-like growth factor II transcriptional
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     unit: heterogeneous transcripts are generated from two promoters by use of multiple polyadenylation sites and differential ribonucleic acid splicing.";
                                                                                                                                                                                                                                                                                                                                                                                                                             Organization,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Shimatsu A., Rotwein P.; "Sequence of two rat insulin-like growth factor I mRNAs differing
                                                                                                                                                                                                                                                                             01-FEB-1991 (Rel. 17, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin).
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                                                                                                                       CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK 111
                                                            Length 133;
                                                          Score 537; DB 1; Length 13
Pred. No. 8.7e-52;
2; Mismatches 8; Indels
 f SIMILARITY.
f SIMILARITY.
f SIMILARITY.
88E5C05B8BD62502 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
MEDLINE=88015572; Pubmed=3658684;
                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-87222423; PubMed-3034909;
  BY
BY
BY
70 B'
83 B'
74 B'
14915 MW;
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                                                            89.6%;
91.0%;
                                                                                    Conservative
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28
40
69
133 AA;
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                                                                       Similarity
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                                                                      Best Local Sim
Matches 101;
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P08024;
 DISULFID
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                       DISULFID
                                    SEQUENCE
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use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to licenseéisb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Oryctolagus cuniculus (Rabbit).
Sukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
NCBI_TaxID=9986;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 181;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INSULIN-LIKE GROWTH FACTOR IB
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Submitted (NOV-1996) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGST 106
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Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF_1.
                                                                                                                                                             EMBL; MIS647; AAA41214.1; JOINED.
EMBL; MIS648; AAA41214.1; JOINED.
EMBL; MIS649; AAA41214.1; JOINED.
EMBL; X06107; CAA29480.1; ALT_SEQ.
EMBL; MIS480; AAA41385.1; ALT_SEQ.
PIR; A27804; A27804.
PIR; A26859; A26859.
PIR; A32857; A32857.
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RNA processing produces two insulin-like growth
                                                                                                                                                                                                                                                                                                                                                                   its structural homology with proinsulin."; J. Biol. Chem. 253:2769-2776(1978).
             factor I precursor peptides.";
J. Biol. Chem. 261:4828-4832(1986).
                                                                                                                                                                                                                                                                                   relation to insulin gene family.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRUCTURE BY NMR. MEDLINE=92316903; PubMed=1319992;
                                                              MEDLINE-86094355; PubMed-3455760;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Biochemistry 30:5484-5491(1991).
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                                                                                                                                                                                                           FEBS Lett. 195:179-184(1986).
                                                                                                                                                                                                                                   SECUENCE OF 22-50 FROM N.A.
                                                                                                                                                                                                                                                                                             Nature 310:777-781(1984).
                                                                                                                                                                                                                                                                                                                                                                                                         STRUCTURE MODELING.
                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 49-118.
                                                                                                                                    SEQUENCE FROM N.A.
  gene. Alternative
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                                                                                                human liver.
                                                                         Rotwein P.;
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  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@labs.ch).
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BY SIMILARITY.
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RY SUPPSTNKRWKSGREREHK -> EVHLKNTSRGSA
           -:- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
-:- SUBCELLULAR LOCATION: Secreted.
-:- ATTERNATIVE PRODUCTS: 2 ISOFORMS; IGF-IA AND IGF-IB (SHOWN HERE);
ARE PRODUCED BY ALTERNATIVE SPLICING.
-:- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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Rotwein P., Pollock K.M., Didier D.K., Krivi G.G.;
"Organization and sequence of the human insulin-like growth factor I
                                                                                                                                                                                                                                                  Print; Pro0049; Insulin; Insulin; Insulin; Insulin; Insulin; PR00276; Insulin. Probom; Pr00077; Insulin. Erobom; Pr00077; Insulin. IGF_relaxin; I. PR00277; Insulin. IGF_relaxin; I. PR00277; Insulin; Growth factor; Plasma; Signal; Alternative splicing. SIGNAL 33 102 INSULIN-IRE GROWTH FACTOR I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              33 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13.AUG-1987 (Rel. 05, Created)
13.AUG-1987 (Rel. 05, Last sequence update)
15.DEC-1998 (Rel. 37, Last annotation update)
Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin C)
IGRU OR IBPI.
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819AF577800A1B1A CRC64;
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Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                          InterPro; IPR000739; Insulin_IGF_relaxin.
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86.5%;
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HSSP; P05019; 1GF1.
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P05019;
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MEDIINE-91242464; PubMed-2036417;
Cooke R.M., Harvey T.S., Campbell I.D.;
"Solution structure of human insulin-like growth factor 1: a nuclear magnetic resonance and restrained molecular dynamics study."; MEDLINE-89207850; PubMed-3242681;
Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P. Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P. (IGFS) synthesized by recombinant DNA technology.";
Biomed Environ. Mass Spectrom. 16:3-8(1988).
-i- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA, ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-!- SUBCELLULAR LOCATION: Secreted.
-!- ALTERNATIVE PRODUCTS: TWO FORMS OF IGF-1, IGF-IA AND IGF-IB ARE PRODUCED BY ALTERNATIVE SPLICING.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY. Sato A., Nishimura S., Ohkubo T., Kyogoku Y., Koyama S., Kobayashi Yasuda T., Kobayashi Y.;
"IH-NMR assignment and secondary structure of human insulin-like growth factor-I (IGF-I) in solution.";
J. Blochem. 111:529-536(1992). MEDLINE-86108862; PubMed-3002851; de Pagter-Holthuizen P., van Schalf F.M.A., Verduijn G.M., van Ommen G.J.B., Bouma B., Jansen M., Sussenbach J.S.; "Organization of the human genes for insulin-like growth factors I MEDLINE-78130171; PubMed-632300; Rinderknecht E., Humbel R.E.; "The amino acid sequence of human insulin-like growth factor I and įυ "Two insulin-like growth factor I messenger RNAs are expressed MEDLINE-84295593; PubMed-6382022; Dull-T.J., Gray A., Hayflick J.S., Ullrich A.; "Insulin-like growth factor II precursor gene organization in of MEDLINE-83210259; PubMed-6189745; Blundell T.L., Bedarkar S., Humbel R.E.; "Tertlary structures, receptor binding, and antigenicity insulinilke growth factors."; Proc. Natl. Acad. Sci. U.S.A. 83:77-81(1986).

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             entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                              INSULIN-LIKE GROWTH FACTOR IB
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  Usage by
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                                                                                                                                                                                                                                                                                                    Practice Tro. JPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00275; INSULINA.
PRINTS; PR00277; INSULINA.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
PROSITE; PS00262; INSULIN, 1.
PROSITE; PS00262; INSULIN, 1.
Alternative splicing; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 464; DB 1;
Pred. No. 1.2e-43;
modified and this statement is not removed.
                            an email to license@isb-sib.ch).
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                                                                                                            AAA52539.1; -. CAA27250.1; ALT_SEQ. CAA27152.1; -.
                                                    EMBL; M14155; AAA52537.1; -. EMBL; M12659; AAA52537.1; JOINED. EMBL; M14153; AAA52537.1; JOINED. EMBL; M14154; AAA52537.1; JOINED.
                                                                                                                                                      CAA27153.1; -. CAA27154.1; -.
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85.3%;
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PDB; 2GF1; 15-APR-93.
PDB; 3GF1; 15-APR-93.
                                                                                                                                                                                            PIR; A23614; A23614.
PIR; A26181; A26181.
PIR; S30540; S30540.
                                                                                                                                                                                PIR; A01611; IGHU1B.
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DISULFID
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Casalla S.J., Smith E.P., van Wyk J.J., Joseph D.R., Hynes M.A., Hoyt E.C., Lund P.K.; "Isolation of rat testis cDNAs encoding an insulin-like growth factor

I precursor."; DNA 6:325-330(1987).

SEQUENCE FROM N.A.

MEDIJUE-89127259; PubMed-3221878; Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Leroith D.; Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Leroith D.; Structure of the rat insulin-like growth factor II transcriptional unit: heterogeneous transcripts are generated from two promoters by use of multiple polyadenylation sites and differential ribonucleic acid soliting ".

SEQUENCE FROM N.A.

Mol. Endocrinol. 2:1115-1126(1988).

acid splicing.

MEDLINE-91103966; PubMed-1368571;
Kato H., Okoshi A., Miura Y., Noguchi T.;
"A new cDNA clone relating to larger molecular species of rat insulin-like growth factor-I mRNA.";
Agric. Biol. Chem. 54:1599-1601(1990).

Eukaryota, Métazoa; Chórdata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.

Rattus norvegicus (Rat)

IGF1 OR IGF-1

Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin).

01-AUG-1988 (Rel. 08, Created) 01-FEB-1991 (Rel. 17, Last sequence update) 30-MAY-2000 (Rel. 39, Last annotation update)

153 AA.

PRT;

STANDARD;

Shimatsu A., Rotwein P.; "Mosaic evolution of the insulin-like growth factors. Organization, sequence, and expression of the rat insulin-like growth factor I

MEDLINE-87222423; "PubMed-3034909;

SEQUENCE FROM N.A.

NCBI_TaxID=10116;

Biol. Chem. 262:7894-7900(1987).

gene.

TISSUE=Testis; MEDLINE-88003970; PubMed-3652906;

SEQUENCE FROM N.A.

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SEQUENCE OF 46-153 FROM N.A. MEDIJINE-87246437; PubMed=355538; Marphy L.J., Bell G.I., Duckworth M.L., Friesen H.G.; "Identification, characterization, and regulation of a rat complementary deoxyribonucleic acid which encodes insulin-like growth
                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 49-118.
MEDLINE-89174609; PubMed-2538424;
Tamura K., Kobayashi M., Ishii Y., Tamura T., Hashimoto K.,
Nakamura S., Niwa M., Zapf J.;
"Primary structure of rat insulin-like growth factor-I and its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  use by non-profit institutions as long a modified and this statement is not removed.
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Gaps

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12; Indels

3; Mismatches

Conservative

87;

Matches

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49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108

61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRR 102

RESULT 5 IGFA_RAT

1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60

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FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT
                     MUCH HIGHER GROWTH-PROMOTING ACTIVITY
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or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                            49 GPETLCGAELVDALQEVCGPRGFYENKPIGYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE-Liver;
MEDLINE-87040760; PubMed=3774549;
Bell G.I., Stempten M.M., Fong N.M., Rall L.B.;
"Sequences of liver cDNAs encoding two different mouse insulin-like
                                                                                                                                                                                                                     PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13-AUG-1987 (Rel. 05, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin).
IGF1 OR IGF-1.
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                                                                                                                                                                                                                                                                                                                                                                           Length 153;
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APL -> VRC (IN REF. 4).
966F3C0FA4EB3DE7 CRC64;
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Pred. No. 1.8e-41;
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PRO0277; INSULINB.
PD001048; Insulin_IGF_relaxin; 1.
                                                                                                                                                      HSSP; P05019; 1GF1.
InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
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D.
E PEPTIDE.
BY SIMILAR
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BY SIMILAR
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Nucleic Acids Res. 14:7873-7882(1986).
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                                                                          AAA41227.1; -.
AAA41386.1; ALT_INIT.
AAA41387.1; ALT_INIT.
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                                              AAA41215.1; JOINED.
AAA41215.1; JOINED.
AAA41215.1; JOINED.
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13-AUG-1987 (Rel. 05, Last sequ
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17079 MW;
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95.3%;
                             CAA29436.1;
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Matches 82; Conservative
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                                                                                                                PIR; JH0133; JH0133.
PIR; B27804; B27804.
PIR; A32857; A32857.
PIR; A28504; A28504.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse)
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110
153 AA;
                                                                                                      A27849; A27849
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                                                        M15648;
M15649;
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                                                                                     M17335;
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P05017;
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PIR;
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SUBCELLULAR LOCATION: Secreted.
ALTERNATIVE PRODUCTS: 2 ISOFORMS; ISOFORM IGF-IA (SHOWN HERE)
AND ISOFORM IGF-IB (AC P05018); ARE PRODUCED BY ALTERNATIVE
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostc
Mammalia, Eutheria, Rodentia, Hystricognathi, Caviidae, Cavia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SMART; SM00078; IIGF; 1. PROSITE; PS00262; INSULIN; 1. Insulin family; Growth factor; Plasma; Alternative splicing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-AUG-1990 (Rel. 15, Created)
01-AUG-1990 (Rel. 15, Last sequence update)
01-FEB-1994 (Rel. 28, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INSULIN-LIKE GROWTH FACTOR IA.
                                                                  SPLICING.
SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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1054B8CAC72DC2D7 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 440; DB 1;
Pred. No. 3.1e-41;
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MGD; MGI:96432; 1gf1.
Interpro; 1F8000739; Insulin_IGF_relaxin.
PFRMTS; PR00279; Insulin; 1.
PRINTS; PR00277; INSULINA.
PRINTS; PR00277; INSULINB.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
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E PEPTIDE.
BY SIMILAR:
BY SIMILAR:
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MEDLINE=90332447; PubMed=2377480;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                74 B)
                                                                                                                                                                                                                                                                                                                           EMBL; X04480; CAA28168.1; -. PIR; A25540; A25540.
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Conservative
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Local Si.
81;
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SEQUENCE FROM N.A.
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                                                   precursor
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                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration
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                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                          85
        FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA, ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-86168194; PubMed-2937782;
Rotwein P., Pollock K.M., Didier D.K., Krivi G.G.;
"Organization and sequence of the human insulin-like growth factor
gene. Alternative RNA processing produces two insulin-like growth
                                                                                                                                                                                                                                                                                                                                                                                                                                26 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Euteleostomi;
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13-ANG-1987 (Rel. 05, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin C).
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                                                                                                                                                                                                                                                                                                                                                                                Length 130;
                                                SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Eutelé
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo
                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                              251B20AEDC5729FF CRC64;
                                                                                                                                                                                                                                                                                                                                                                               Score 423; DB 1; L. Pred. No. 2.3e-39; 1; Mismatches 7;
                                                                                                                                                                                                                                               Insulin family; Growth factor; Plasma; Signal. SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  153 AA
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SIMILARITY.
SIMILARITY.
                             MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
                                                                                                                                                                                               PRINTS; PRO0276; INSULINA.
PRINTS; PRO0277; INSULINB.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; I1GF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                            InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                       PEPTIDE
 Nucleic Acids Res. 18:4275-4275(1990)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       factor I precursor peptides.";
J. Biol. Chem. 261:4828-4832(1986).
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                                                                                                                                                                                                                                                                                                              ÖВ
                                                                                                                                                                                                                                                                                                                                                              14342 MW;
                                                                                                                                              EMBL; X52951; CAA37127.1; -. PIR; S12719; IGGP1.
HSSP; P05019; 1GF1.
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nes 78; Conservative
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54
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P01343;
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Sato A., Nishinura S., Ohkubo T., Kyogoku Y., Koyama S., Kobayashi M., Yasuda T., Kobayashi Y., "IH-NMR assignment and secondary structure of human insulin-like
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          de Pagter-Holthuizen P., van Schaik F.M.A., Verduijn G.M., van Ommen G.J.B., Bouma B.N., Jansen M., Sussenbach J.S.;
"Organization of the human genes for insulin-like growth factors I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-78130171; PubMed-632300; Rinderknecht E., Humbel R.E.; Frinderknecht E., Humbel R.E.; The amino acid sequence of human insulin-like growth factor I and its structural homology with proinsulin."; J. Biol. Chem. 253:2769-2776(1978).
                                            D.E.
                                                                                                                                                                                                                                                                                                                                                   le Bouc Y., Dreyer D., Jaeger F., Binoux M., Sondermeyer P.; "Complete characterization of the human IGF-I nucleotide sequence isolated from a newly constructed adult liver CDNA library."; FEBS Lett. 196:108-112(1986).
MEDIINE=84068210; PubMed=6358902;
Jansen M., van Schaik F.M.A., Ricker A.T., Bullock B., Woods D.E.,
Gabbay K.H., Nussbaum A.L., Sussenbach J.S., van den Brande J.L.;
"Sequence of CDNA encoding human insulin-like growth factor I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'Complete nucleotide sequence of the high molecular weight human
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Dull T.J., Gray A., Hayflick J.S., Ullrich A.;
"Insulin-like growth factor II precursor gene organization in
relation to insulin gene family.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Steenbergh P.H., Koonen-Reemst A.M.C.B., Cleutjens C.B.J.M.,
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Blundell T.L., Bedarkar S., Humbel R.E.;
Tertiary structures, receptor binding, and antigenicity insulinlike growth factors.";
Fed. proc. 42:2592-2597(1983).
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                                                                                                                                                                                             Nature 306:609-611(1983).
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                                                               Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.;
Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.;
"Location of disulphide bonds in human insulin-like growth factors
(IGFS) synthesized by recombinant DNA technology.";
Biomed. Environ. Mass Spectrom. 16:3-8 (1988).

-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-!- SUBCELLULAR LOCATION: Secreted.
-!- SUBCELLULAR PRODUCTS: TWO PORMS OF IGF-1, IGF-IA AND IGF-IB ARE
PRODUCED BY ALTERNATIVE SPLICING.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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Pfam; PF00049; Insulin; 1.
PRINTS; PR00275; INSULINA.
PRINTS; PR00277; INSULINA.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
PROSITE; PS00262; INSULIN; 1.
PROSITE; PS00262; INSULIN; 1.
Alternative splicing; Signal.
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growth factor-I (IGF-I) in solution.";
J. Biochem. 111:529-536(1992).
                                                                                                                                                                                                                                                                                                                                            EMBL; M14156; AAA52538.1; -...
EMBL; M12659; AAA52538.1; JOINED.
EMBL; M14154; AAA52538.1; JOINED.
EMBL; X00173; CAA2558.1; JOINED.
EMBL; X00173; CAA27250.1; -...
EMBL; X03563; CAA27250.1; ALT_SEQ.
EMBL; X03420; CAA27152.1; -...
EMBL; X03421; CAA27152.1; -...
EMBL; X03421; CAA27153.1; -...
                           [12]
DISULFIDE BONDS.
MEDLINE-89207850; PubMed=3242681;
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2GF1; 15-APR-93.
3GF1; 15-APR-93.
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A23614; A23614.
A23622; A23622.
S30519; S30519.
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X56773;
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MIM; 265850;
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STRAIN=SHIBA; TISSUE-Liver;
MEDLINE-95290780; Pubmed-7772848;
Mikawa S., Yoshikawa G.-I., Yamano Y., Sakai H., Komano T., Hosoi Y.,
                                                                                                                                                                                                                                                                                                                                                  1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
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Biosci. Biotechnol. Biochem. 59:759-761(1995).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA, ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
-!- SUBCELLULAR LOCATION: Secreted.
-!- TISSUE SPECIFICITY: EXPRESSED IN ALL TISSUES EXAMINED: BRAIN, LOUG, LIVER, SPLEEN, UTERUS, OVARY, TESTIS, HEART AND SKELETAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Capra hircus (Goat).
Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostoml;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Caprine; Capra.
NCBI_TaxID=9925;
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16-0CT-2001 (Rel. 40, Last sequence update)
16-0CT-2001 (Rel. 40, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
                                                                                                                                                                                                                                        Length 153;
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                                                                                                                                                                                                                 Score 423; DB 1; Length 13. Pred. No. 2.8e-39;
                                                                                                                                                                                        17026 MW; C6ECD92DCA9B37BC CRC64;
                                                                                                                                                                                                                       70.6%; Scor.
90.7%; Pred. No. 2...
1; Mismatches
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Pfam; PF00049; Insulin; 1.
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PRINTS; PR00277; INSULINB.
ProDom; PD001048; Insulin_
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Matches 78; Conservative
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P51457;
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DISULFID
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                                                                                                                                                          0;
                                                                                                                                                                                    50 GPETLCGAELVDALQEVCGDRGFYENKPIGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109
                                                                                                                                                          Gaps
                                                                                                                                                                           1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                            Canis familiaris (Dog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                       01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
                                                                                                                                       Length 154;
                                   BY SIMILARITY.
INSULIN-LIKE GROWTH FACTOR I.
                                                                                                                                                         7; Indels
                                                                                                                       07238B6AF3068422 CRC64;
                                                                                                                                      Score 423; DB 1;
Pred. No. 2.8e-39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
Probom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IlGF; 1.
Insulin family; Growth factor; Plasma; Signal.
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                   Growth factor; Plasma; Signal.
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PIR; PN0622; PN0622.
HSSP; P05019; 1GF1.
                                                                                                                                                                                                           61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
                                                                                               BY
SM00078; IlGF; 1.
                                                                                                                        17082 MW;
                                                                                                                                        70.6%;
90.7%;
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Matches 78; Conserv
                                                                                                                       154 AA;
                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
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         PROSITE; PS0026;
Insulin family;
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ID IGF1_CANFA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-89096956; PubMed-3211153;
Tavakkol A., Simmen F.A., Simmen R.C.M.;
Porothe insulin-like growth factor-I (pIGF-I): complementary
deoxyribonucleic acid cloning and uterine expression of messenger
ribonucleic acid encoding evolutionarily conserved IGF-I peptides.";
Mol. Endocrinol. 2:674-681(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 79
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Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIINE-90221822; PubMed-2326169;
Mueller M., Brem G.;
"Nucleotide sequence of porcine insulin-like growth factor. 1:5'
                                                                                                                                                                                                                                                                                                                                                                                                                       ö
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01-AUG-1990 (Rel. 15, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
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J. Mol. Endocrinol. 11:201-21(1993).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT
                                                                                                                                                                                                                                                                                                                                                       Length 122;
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-! SUBCELLULAR LOCATION: Secreted.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                 INSULIN-LIKE GROWTH FACTOR I.
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BY SIMILARITY.

BY SIMILARITY.

036A004DC44E7D75 CRC64;
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Nucleic Acids Res. 18:364-364(1990).
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            SIMILARITY.
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1; Mismatches
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19 B
89 I
48 B
60 C
81 A
89 D
122 E
67 B
71 A
13407 MW;
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89.5%;
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Best Local Similarity 89.5
Matches 77; Conservative
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                                                                                                                                                                                                                                                                                                   122 AA;
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entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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MEDLINE-95172127; PubMed-7867698;
MEDLINE-95172127; PubMed-7867698;
MEDLINE-97172127; PubMed-7867698;
MEDLINE-9517217; PubMed-7867698;
MEXPRESSION Of insulin-1 prowth factor 1 (IGF-1) in the bovine oviduct during the oestrous cycle.";
Exp. Clin. Endocrinol. 102:364-369(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fotsis T., Murphy C., Gannon F.; "Nucleotide sequence of the bovine insulin-like growth factor 1 (IGF-1) and its IGF-1A precursor.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 153;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8; Indels
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6098792DCDA0CD7D CRC64;
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Pred. No. 9.7e-39;
1; Mismatches 8;
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Pfam; PF00049; Insulin; 1.
PRINTS; PR00275; INSULINA.
ProDom; PD001048; INSULINA.
SMART; SM00078; INSULINA.
SMART; SM00078; INSULINA.
INSULINATION INSULINATION
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                                      R EMBL; X52388; CAA35527.1; -...RBL; X52288; CAA36617.1; -...RBL; X52077; CAA36296.1; -...RBL; M31175; AAA31043.1; ALT_INIT. EMBL; X17638; CAA36532.1; -...PIR; S12825; S12825.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (IGF-1) and its IGF-1A precursor.";
Nucleic Acids Res. 18:676-676(1990)
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Matches 77; Conservative
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                                                                                                                                                                                                                                                                                                                      -:- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
-:- SUBCELLULAR LOCATION: Secreted.
-:- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                     MEDLINE-8826820; PubMed=3390164;
Francis G.L., Upton F.M., Ballard F.J., McNeil K.A., Wallace J.C.;
"Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences
and biological activities compared with those of a potent truncated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                   Honegger A., Humbel R.E.; "Insulin-like growth factors I and II in fetal and adult bovine serum. Purification, primary structures, and immunological cross-reactivities" J. Biol. Chem. 261:569-575(1986).
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Pred. No. 9.7e-39;
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64201B6AF3140999 CRC64;
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PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Signal.
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EMBL; S76122; AAD14209.1; --
PIR; A25623; IGBO1.
PIR; S00465; S00465.
PIR; S12672; S12672.
HSSP; P05019; IGF1.
InterPro; IPR00779; Insulin_IGF_relaxin.
PFAM; PR000279; Insulin, 1.
PRINTS; PR00277; INSULINA.
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E PEPTIDE.
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MEDLINE=86085881; PubMed=3941093;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17066 MW;
                                                                                                                                                                                                                                                                                                     Biochem. J. 251:95-103(1988)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     69.8%;
89.5%;
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Best Local Similarity 89.5'
Matches 77; Conservative
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17012 MW;
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llarity 88.4%;
Conservative
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                                                                 AAA31545.1;
AAA31546.1;
                                                                                          AAA31547.1;
                                                                                                       CAA49230.1;
                                                                                                                                             CAA49230.1;
                                                                                                                                                                                                                                  X69475; CAA49232.1;
M89787; AAA31544.1;
                                                                                                                               CAA49230.1;
                                                                                                                                                           CAA49231.1;
                                                                                                                                                                      CAA49231.1;
                                                                                                                                                                                  X69474; CAA49231.1;
                                                                                                                                                                                                 CAA49231.1;
                                                                                                                                                                                                           CAA49232.1;
                                                                                                                                                                                                                         CAA49232.1;
                                       AAA80535.1;
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101
21
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PIR, B33390, B33390.
PIR, S07198, S07198.
PIR, S07965, S07965.
HSSP, P05019, IGF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         154 AA;
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nes 76; Conserv
                                                                           M31735;
M31735;
                                                                                                      X69472;
X69473;
                                                                                                                                                                                               X69475;
X69473;
                                                                                                                                                                      x69473;
                                                                 M31736;
                                                                                                                                             X69475;
                                                                                                                                                                                                                       X69474;
                                                     M31734;
                                                                                                                               X69474;
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IGF1.
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DISULFID
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SEQUENCE
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EMBL;
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EMBL;
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IGF1_COTJA
                                                                                          EMBL;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 50-79.
MEDLINE-89323215; Pubmed-2752053;
Hey A.W., Browne C.A., Simpson R.J., Thorburn G.D.;
Hey A.W., Browne C.A., Simpson R.J., Thorburn G.D.;
Hey A.W., Browne C.A., Simpson R.J., Thorburn G.D.;
Hey Daylor State Solution of insulin-like growth factors I and II from adult sheep serum.";
Historian. Biophys. Acta 997:27-35(1989).
-i- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
                                                                                                                                                                             MEDLINE-90126234; PubMed-2575490;
Wong E.A., Ohlsen S.M., Godfredson J.A., Dean D.M., Wheaton J.E.;
"Cloning of ovine insulin-like growth factor-I cDNAs: heterogeneity
in the mRNA population.";
DNA 8:649-657(1989).
                                                                                                                                                                                                                                                                                                                                                                                                 Ohlsen S.M., Dean D.M., Wong E.A.; Characterization of multiple transcription initiation sites of the ovine insulin-like growth factor-I gene and expression profiles of three alternatively spliced transcripts."; DNA Cell Biol. 12:243-251(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-1- SUBCELLULAR LOCATION: Secreted.
-1- ALTERNATIVE PRODUCTS: 3 ISOFORMS; A, B (SHOWN HERE) AND C; ARE PRODUCED BY ALTERNATIVE SPLICING.
-1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN-COOPWORTH, TISSUE-Liver;
MEDLINE-93250011; PubMed-8485157;
Demmer J., Hill D.F., Petersen G.B.;
"Characterization of two sheep insulin-like growth factor II chars with different 5'-untranslated regions.";
Blochim. Biophys. Acta 1173:79-80(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ballard F.J., Owens P.C.; II: sequences, activities
                                                                                                      Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                       Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                 MEDLINE-91197361; PubMed-2015053;
Dickson M.C., Saunders J.C., Gilmour R.S.;
"The ovine insulin-like growth factor-I gene: characterization, expression and identification of a putative promoter.";
         01-UTL-1989 (Rel. 11, Created)
01-FEB-1991 (Rel. 17, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-89136887; Pubmed-2537174;
Francis G.L., McNeil K.A., Wallace J.C.,
"Sheep insulin-like growth factors I and
                                                                                                                                                                                                                                                                                                                                      Mol. Endocrinol. 6:17-31(1991).
                                                                                                                                                                                                                                                                                                                                                                           TISSUE=Liver;
MEDLINE=93221682; PubMed=8466647;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Endocrinology 124:1173-1183(1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 55-135 FROM N.A.
                                                                                                               Bovidae; Caprinae; Ovis.
                                                                                      Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                           Ovis aries (Sheep).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 50-119.
                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                           NCBI_TaxID=9940;
                                                                                                                                                                   TISSUE-Liver;
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50 GPETLCGAELVDALQEVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                     Insulin family; Growth factor; Plasma; Signal; Alternative splicing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B.
C.
A.
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E PEPTIDE.
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PS1462;
01-0CT-1996 (Rel. 34, Created)
01-0CT-1996 (Rel. 34, Last sequence update)
16-0CT-2001 (Rel. 40, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INSULIN-LIKE GROWTH FACTOR I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -> V (IN REF. 4).
E226CE6AF653CF3F CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 410; DB 1; Leng
No. 7.3e-38; J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. 7.36
1; Mismatches
                                                                                                                                                                                                                                                                                                    InterPro; IPR000739; Insulin_IGF_relaxin.
                                                                                                                                                                                                                                                                                                                  Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
ProDom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ISOFORM C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAPLKAAKSARSVRAQRHTDMPKAQK 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CVRCKPTKSARSIRAQRHTDMPKTQK 86
JOINED.
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 Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                     Rotwein P., Kajimoto Y.; "Structure of the chicken insulin-like growth factor I gene reveals "Structure of the chicken is."; conserved promoter elements."; J. Biol. Chem. 266:9724-9731(1991).
                                                                                        Kajimoto Y., Rotwein P.;
"Structure and expression of a chicken insulin-like growth factor
precursor.";
                                                                                                                                                                                                                                                                                            MEDLINE=91106695; PubMed=2272467;
Ballard F.J., Johnson R.J., Owens P.C., Francis G.L., Upton F.M., Mourtry J.P., Wallace J.C.;
"Chicken insulin-like growth factor-I: amino acid sequence, radioimmunoassay, and plasma levels between strains and during
                                                                                                                                                                                                                                                                                                                                                                                     Gen. Comp. Endocrinol. 79:459-468(1990).

-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT MUCH HIGHER GROWTH-PROMOTHING ACTIVITY.

-!- SUBCELLULAR LOCATION: Secreted.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 384; DB 1; Length 153;
Pred. No. 5e-35;
6; Mismatches 17; Indels
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AMELIFUEDIJEEZF8 CRC64;
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SMART; SM00078; I1GF; 1.
PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
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C.
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E PEPTIDE.
BY SIMILAR
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                                                                                                                                         Endocrinol. 3:1907-1913(1989).
                                                                                                                                                         [2]
SEQUENCE OF 1-21 FROM N.A.
MEDLINE=91236750; Pubmed=2033062;
                                                             SEQUENCE FROM N.A. MEDLINE=90190648; Pubmed=2628728;
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MM
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ilarity 70.8%;
Conservative
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SEQUENCE OF 49-118.
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tes 75; Conserv
                                NCBI_TaxID=9031;
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                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation—the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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Coturnix coturnix japonica (Japanese quail).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                        Insulin-like growth factor-I messenger RNA content in the oviduct of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20 GPETLCGAELVDALQFVCGDRGFYFSKPTGYGSSSRRLHHKGIVDECCFQSCDLRRLEMY 79
                                                                                                              Kida S., Iwaki M., Nakamura A., Miura Y., Takenaka A., Takahashi S.,
Noguchi T.;
                                                                                                                                                                   Japanese quail (Coturnix coturnix japonica): changes during growth and development or after estrogen administration.", comp. Biochem. Physiol. 109C:191-204(1994).

-i- FUNCTION: THE INSULIA-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IGF1.
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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01-NOV-1990 (Rel. 16, Last sequence update)
01-NOT-1990 (Rel. 34, Last annotation update)
Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POTENTIAL.
INSULIN-LIKE GROWTH FACTOR I.
                                                                                                                                                                                                                                                 MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
SUBCELLULAR LOCATION: Secreted.
SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGST 106
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Pred. No. 3.9e-35;
6; Mismatches 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIMILARITY.
SIMILARITY.
SIMILARITY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   HSSP; P05019; 1GF1.
InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ProDom; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IlGF; 1.
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C.
A.
D. PEPTIDE.
BY SIMILAR
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Insulin family; Growth factor; Plasma.
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                                                                                                          MEDLINE=95187621; PubMed=7881819;
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ilarity 70.8%;
Conservative
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Best Local Similarity
Matches 75; Conserv
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                                                                                            SEQUENCE FROM N.A.
                                                             NCBI_TaxID=93934;
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IGF1_CHICK
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Gaps

Search completed: October 25, 2002, 15:57:35 Job time : 7.68675 secs

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29myz6 trichosurus Q63265 rattus norv P79890 gallus gall

Gaps

Ouery Match 81.2%; Score 486.5; DB 4; Length 139; Best Local Similarity 84.7%; Pred. No. 3.7e-51; Matches 94; Conservative 2; Mismatches 14; Indels 1

SEQUENCE

423 423 418 402 384 362.5

362 361 361 361 360 360 360

486.5

Result Š. oncorhynchu

Perfect score:

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OM protein -

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MEDLINE=95237119; PubMed=7720641;
Chew S.L., Lavender P., Clark A.J., Ross R.J.;
Chew S.L., Lavender P., Clark A.J., Ross R.J.;
Lavender Spilia Poptide Lissue expression that diverts away from the mitogenic IBEI peptide.";
Endocrinology 136:1939-1944(1995).
-: SUBCELULIAR LOCATION: SECRETED (BY SIMILARITY).
-: SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR-I (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                        139 AA
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HSSP; P01343; IGF1.
Interpro; IPR000739; Insulin_IGF_relaxin.
Pfan; PF00049; Insulin; 1.
PR.NTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
PRINTS; PR00277; INSULINA.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; ILSF; 1.
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                                                                                  042289
Q9YIB2
P79824
073720
Q9YI57
042336
002807
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028236
042429
073721
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Q90XD0
Q90WW4
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SEQUENCE FROM N.A.
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42.7
42.1
40.1
39.7
38.1
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Q13429;
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Q13429
 Q9np10 homo sapien
Q14620 homo sapien
Q9n101 bos taurus
P79167 equus cabal
O91380 meleagris g
Q91210 oncorhynchu
Q91475 salmo salar
Q91162 oncorhynchu
Q91162 oncorhynchu
P81268 oncorhynchu
P81268 oncorhynchu
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                                                                      2002, 15:53:12 ; Search time 20.7289 Seconds (without alignments) 926.360 Million cell updates/sec
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599
1 GPETLGABLVDALQFVCGP......THKKRKLQRRRKGSTLEEHK 111
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          GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd
                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                          562222 seqs, 172994929 residues
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P97899
Q9NP10
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Q91162
Q91965
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Q91161
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Gapop 10.0 , Gapext 0.5
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MEDLINE-91103966; PubMed=1368571;

Kato H., Okoshi A., Mura Y., Noguchi T.;

A new cDNA clone relating to larger molecular species of rat insulin-
like growth factor-I mRNA.";

AGTIC. Chem. S4:1599-1601(1990).

-1 - SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).

-1 - SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

EMBL. D00698; BAA00604.1;

HSSP. -- TANANATON: TANANATON.
                                                                                                                                                                                                                                                                                                                                                          Rattus sp.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
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              1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY
                                   10 GPETLCGAELVDALQEVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGSTLEEHK 111
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Shimatsu A., Rotwein P., "Mosaic evolution of the insulin-like growth factors."; J. Biol. Chem. 262:7894-7900(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POTENTIAL.
104E126BCFCA5CB7 CRC64;
                                                                                                                                                                                                                                                                                                 (TrEMBLrel. 03, Last sequence update) (TrEMBLrel. 19, Last annotation update)
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Last sequence update)
Last annotation update)
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Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
PRODON; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              PARTIAL SEQUENCE FROM N.A.
MEDLINE-87222423; PubMed-3034909;
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01-DEC-2001
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P97899;
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SEQUENCE FROM N.A.
MEDLINE=88065102; PubMed=3683205;
Rall L.B., Scott J., Bell G.I.;
"Human insulin-like growth factor I and II messenger RNA: isolation of complementary DNA and analysis of expression.";
Meth. Enzymol. 146:239-248(1987).
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SEQUENCE FROM N.A.
MEDLINE=91187000. PubMed=2082190;
Tobin G., Yee D., Brunner N., Rotwein P.;
Tobin G., Yee D., Brunner N., Rotwein P.;
"A novel human insulin-like growth factor I messenger RNA is expressed in normal and tumor cells.";
Mol. Endocrinol. 4:1914-1920(1990).
SUBCELCIOLAR LOCATION: SECRETED (BY SIMILARITY).
SUBCELCIOLAR LOCATION: SECRETED (BY SIMILARITY).
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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                                                                                                                                                                                                                                            - SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
- SINDICELLULAR LOCATION: SECRETED (BY SIMILARITY).
- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
BENEL; M29644; AAA52543.1;
- HSSP; P01343; IGF1.
- INTERPRO; PR00079; INSULINA.
- PRINTS; PR00276; INSULINA.
- PRINTS; PR00077; INSULINB.
- SMART; SM00078; ILGF; ILSLIII...IGF_relaxin; 1.
- PROSITE; PS00262; INSULIN; 1.
Eutheria; Primates; Catarrhini; Hominidae; Homo.
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33 137 INSULIN-LIKE GROWTH FACTOR
137 AA; 15177 MW; BFCCOD11E32AB75D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 423; DB 4; LA Pred. No. 1.7e-43; 1; Mismatches 7;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR000739; Insulin_IGF_relaxin. Pfam; PF00049; Insulin; 1. PRINTS; PR00276; INSULINA. PRINTS; PR00277; INSULINA. PRODOM; PR001048; Insulin_IGF_relaxin; 1. SMART; SM00078; IIGF; 1. PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           70.68;
90.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 70.65
Best Local Similarity 90.77
Matches 78; Conservative
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HSSP; P01343; 1GF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (Human)
                    NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=9606;
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Eukaryota; Metazoa;
Mammalia; Eutheria;
                                  NCBI_TaxID=9796;
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NON_CONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DISULFID
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093380
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                                 Gaps
                                                               1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
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                                                                                                                                                                                                                                                                                                                     Lien S., Karlsen A., Klemetsdal G., Vage D.I., Olsaker I., Klungland H., Aasland M., Heringstad B., Ruane J., Gomez-Raya L.;
"A primary screen of the bovine genome for quantitative trait loci affecting twinning rate.";
submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases.
-! SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-! SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
EMBL; AF210387; AAF72409.1; JOINED.
                                                                                                                                                                                                                                            Bos taurus (Bovine).
Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY
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01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR IB PRECURSOR (IGF-IB) (SOMATOMEDIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 133;
Score 423; DB 4; Lengua ...
Pred. No. 1.8e-43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   69.8%; Score 418; DB 6; Length 13
89.5%; Pred. No. 6.9e-43;
.ive 1; Mismatches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A6991DBCB75C103B CRC64;
                                                                                                                                                                                       01-07T-2000 (TrEMBLrel. 15, Created)
01-07T-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  139 AA
                               1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                            HSSP; P01343; IGF1.
InterPro; IPR000739; Insulin_IGF_relaxin.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
PRODOM; PD001048; INSULIN_IGF_relaxin; 1.
SWART; SM00078; IIGF; 1.
                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                            61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 CVRCKPTKSARSIRAQRHTDMPKTQK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                133 AA; 14674 MW;
        70.6%;
90.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS00262; INSULIN; 1.
                               78; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 69.8
Best Local Similarity 89.5
Matches 77; Conservative
                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Equus caballus (Horse)
                     Best Local Similarity
                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                        NCBI_TaxID=9913;
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SEQUENCE
          Query Match
                                                                                                                                                                   Q9N1C1
Q9N1C1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P79167;
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                               Matches
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ID Q
AC Q
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Otte K., Rozell B., Gessbo A., Engstrom W.; "Cloning and sequencing of an equine insulin-like growth factor I cDNA and its expression in fetal and adult tissues.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-!- SUBCELLULAR LOCATION: SECRETED.
-!- ALTERNATIVE PRODUCTS: TWO ISOFORMS; ISOFORM IGF-IA (P51458) AND ISOFORM IGF-IA (SHOWN HERE); ARE PRODUCED BY ALTERNATIVE SPLICING (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   49 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAPQTGIVDECCFRSCDLRRLEMY 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
Chordata; Craniata; Vertebrata; Euteleostomi; Perissodactyla; Equidae; Equus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Meleagris gallopavo (Common turkey).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12;
                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 123-139 FROM N.A.
Nixon A.J., Toland B.D., Sandell L.J.;
Submitted (Jan-1997) to the BRBL/GenBank/DDBJ databases.
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BY SIMILARITY.
INSULIN-LIKE GROWTH FACTOR IB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15612 MW; CDC0E8F19C261A2C CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-NOV-1998 (TrEMBLrel. 08, Created)
01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR-I PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           67.1%; Score 402; DB 6;
76.7%; Pred. No. 6.2e-41;
iive 2; Mismatches 10;
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BY SIMILARITY.
BY SIMILARITY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; U28070; AAA68952.1; -.
EMBL; U85271; AB47484.1; -.
EMBL; U8143; 1GF1.
InterPro; IPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PD001048; Insulin_IGF_relaxin; 1.
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C.
A.
D.
E PEPTIDE.
                                                                                                                                                                                                                                                                                            Comp. Endocrinol. 102:11-15(1996).
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Insulin family; Growth factor; Signal.
                                                                                                                                            TISSUE=LIVER;
MEDLINE~97013467; PubMed=8860303;
                                                                                                                 SEQUENCE OF 1-122 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
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Watches 79; Conservative
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SMART; SM00078; IIGF; 1.
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                                                          Query Match
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091476;
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SIGNAL
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Archosauria; Aves; Neognathae; Galliformes; Meleagrididae; Meleagris.
NCBL_TaxID=9103;
                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                    1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Oncornynchus tschawytscha (Chinook salmon) (King salmon). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostel; Euteleostei; Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus. NCBI_TaxID=74940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
STRAIN=BIG QUALLCUM RIVER, B.C.; TISSUE=LIVER;
MEDLINE=91247592; PubMed=7683374;
Wallis A.E., Devlin R.H.;
"Duplicate insulin-like growth factor-I genes in salmon display
                                                                                                                                                                                                                                                                                                                                                           8;
                                                                                                                                                                                                                                                                                                                                  Length 153;
                                                   STRAIN-BIG 6 ML TOM; TISSUE-LIVER;

CZCETYLINKI S.M., Ashwell C.M., McMuttry J.P.;

"Cloning of turkey insulin-like growth factor-I (IGF-I).";

Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLUIAR LOCATION: SECRETED (BY SIMILARITY).
--- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

EMBL; AF074980; AAC26006.1; --
HSSP; P01343; IGFI.

HIGFPRO: IPRODAYO | Insulin_IGF_relaxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Devlin R.H.;
Submitted (OCT-1994) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                       INSULIN-LIKE GROWTH FACTOR-I.
5AF1E5B8D13C70B5 CRC64;
                                                                                                                                                                                                                                                                                                                                                          17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRKKGST 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                                                                                                                                                               Score 384; DB 13;
Pred. No. 1e-38;
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SEQUENCE FROM N.A.
STRAIN-BIG QUALICUM RIVER, B.C.; TISSUE-LIVER;
                                                                                                                                                                                                                                                                                                                    161 AA
                                                                                                                                                                        Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
PRODOM; PD001049; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PD001048; Insulin_IGF_relaxin; 1.
                                                                                                                                                                                                                                                                          POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   alternative splicing pathways.";
Mol. Endocrinol. 7:409-422(1993).
                                                                                                                                                                                                                                                                        1 48 PC
49 118 IN
153 AA; 17295 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INSULIN-LIKE GROWTH FACTOR-I.
                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 69.8
Matches 74; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                      SEQUENCE FROM N.A.
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ProDom; PD00104
                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                               Query Match
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                                                                                                                                                                 45 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 104
                                                                                                     Gaps
                                                                                                                                         1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
101-DEC-2001 (TrEMBLrel. 19, Last annotation update)
1NSUIN-LIKE GROWTH FACTOR I PRECURSOR (FRAGMENT).
Salmo salar (Atlantic salmon).
Salmo salar (Atlantic salmon).
Retaryota: Metacac, Chordata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5;
                                                                                                   3;
                                                             Length 161;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POTENTIAL.
INSULIN-LIKE GROWTH FACTOR I.
A97666EE2F526EAC CRC64;
                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19; Indels
                                                                                                                                                                                                                        61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLS--THKKRKLQRRRKGS 105
                                                                                                                                                                                                                                               161 AA; 17763 MW; A5A85D121377BF67 CRC64;
                                                             DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 362; DB 13;
Pred. No. 3.6e-36;
9; Mismatches 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAPVKSGKAARSVRAQRHTDMPRTPKNLYLGIVTHLARR 117
                                                         60.5%; Score 362.5; DB 1
66.4%; Pred. No. 4.4e-36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLS--THKKRK 97
                                                                                                 11; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; TPR000739; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINA.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
SMART; SM00078; IIGF; 1.
PROSITE; PS00262; INSULIN; 1.
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01-OCT-2000 (TrEMBLrel. 15, Created)
                                                                                                                                                                                                                                                                                                                                                                      PRT;
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<1 18 PO
19 88 IN
117 AA; 12867 MW;
PROSITE; PS00262; INSULIN; 1. SEQUENCE 161 AA; 17763 MW;
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69.7%;
                                                                              Best_Local Similarity 66.49
Matches 71; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 69.7*
Matches 69; Conservative
                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=8030;
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ID Q9
AC Q9
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PS00262; INSULIN;
                                                                                                                                                                                                                                                                                                                                                68; Conservative
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73
155 1
155 AA;
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Matches 68; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          [2]
SEQUENCE FROM N.A.
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                                                                                                                                                                           NON_TER
SEQUENCE
       PROSITE;
                                                                                                                                                                                                                                                                               Query Match
Best Local 9
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SIGNAL
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SIGNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                               MeDular-Josephane C. H., Cheng 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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                                                                                                                                           Cyprinus carplo (Common carp).

Bukaryota: Metazoa: Chordata: Craniata: Vertebrata; Euteleostoni;
Actinopterygii: Neopterygii: Teleostei: Euteleostei: Ostariophysi: Cypriniformes; Cyprinidae: Cyprinus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 178;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 CVRCKPTKSARSIRAQRHTDMPKTQK----SQPLSTHKKRKLQRRRKGST 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      growth factor I prohormones in salmon.";
abl. Endocrinol. 6:1202-1210(1992).
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     178 AA; 19687 MW; 7075A34FF379C459 CRC64;
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I SUBTYPE EA2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               update)
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update:
INSULIN-LIKE GROWTH FACTOR I PRECURSOR (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24;
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62.7%; Pred. No. 5.7e-36;
iive 13; Mismatches 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    145 AA
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                                                                                                                                                                                                                                                                                                                                                                         TISSUE=LIVER;
MEDLINE=96241923; PubMed=8680527;
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PROSITE; PS00262; INSULIN; 1.
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Matches 69; Conservative
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                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                            NCBI_TaxID=7962;
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   01-OCT-2000
01-DEC-2001
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                                                                                                                                                                                                                   1 GPETLCGAELVDALQFVCGPRGFYFNKPTVYGSSIRRAPQTGIVDECCFRSCDLRRLEMY 60
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                                                                                                                                                                                                                                               19 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-NOV-1996 (TERMELEI. 01, Last sequence update)
01-DEC-2001 (TERMELEI. 19, Last annotation update)
11NSULIN-LIKE GROWTH FACTOR I PRECURSOR (FRAGMENT).
01COCHYNOLUS KISULCH (Coho salmon).
EUKATYOLA: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
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-hes 24; Indels
POTENTIAL.
INSULIN-LIKE GROWTH FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POTENTIAL.
INSULIN-LIKE GROWTH FACTOR
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                                                                     15885 MW; 3D94EDF477268FC4 CRC64;
                                                                                                                                                                                                                                                                                                                                            61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRR 101
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67.3%; Pred. No. 6.5e-36;
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                                                                                                                                                                    9; Mismatches
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Pfam. PF00049; Insulin. 1
PRINTS; PR00276; INSULINA.
PRINTS; PR00277; INSULINB.
PRODOM; PD001048; Insulin_IGF_relaxin; 1.
                                                                                                                      Score 361;
Pred. No. 6
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MEDLINE=93024477; PubMed=1406698;
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SEQUENCE FROM N.A
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Oncorhynchus tschawytscha (Chinook salmon) (King salmon).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygil; Neopterygil; Teleostel; Euteleostel;
Protacanthopterygil; Salmoniformes; Salmonidae; Oncorhynchus.
NCBI_TaxID=74940;
                                                                                                                                                                                                                                         TISSUE=LIVER;
MEDLINE=93247592; PubMed=7683374;
Wallis A.E., Devlin R.H.;
"Duplicate insulin-like growth factor-I genes in salmon display
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                                                                                                                                                                                                                                                                                                                                                                           Devlin R.H.;
Submitted (SEP-1994) to the EMBL/GenBank/DDBJ databases.
Subschillar LOCATION: SECRETED (BY SIMILARITY).
-:- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60.3%; Score 361; DB 13; Length 1 67.3%; Pred. No. 8e-36; ive 9; Mismatches '24; Indels
                                                                                                                                                                                                                                                                                                                                      Submitted (OCT-1994) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                          Interpro; IPR00073; Insulin_IGF_relaxin.
Pfam; PF00049; Insulin; 1.
PRINTS; PR00277; INSULINA.
PRODDM; PD001048; Insulin_IGF_relaxin; 1.
SWART; SM0078; IIGF, 1.
SPROSTE; S800562; INSULIN; 1.
SEQUENCE 188 AA; 20782 MW; F4D705BA811024B8 CRC64;
                                                                                                                                    01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRR 101
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                                                                                                                            Created)
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P81268;
01-AUG-1998 (TrEMBLrel. 07, Created)
                                                                                                                                                                                                                                                                               alternative splicing pathways.";
Mol. Endocrinol. 7:409-422(1993).
                                                                                                                                                      INSULIN-LIKE GROWTH FACTOR-I.
                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; U15960; AAA67266.1; -.
EMBL; U14536; AAA67263.1; -.
HSSP; P01343; 1GF1.
                                                                                                                           01-NOV-1996 (TrEMBLrel. 01,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   68; Conservative
                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                    TISSUE=LIVER;
                                                                                                                                                                                                                                                                                                                                                                  TISSUE=LIVER;
                                                                                                                                                                                                                                                                                                                            Devlin R.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                      Q91965
Q91965;
                                                                                     RESULT 13
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45 GPETLCGAELVDTLQFVCGERGFYFSKPTGYGPSSRRSHNRGIVDECCFQSCELRRLEMY 104
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                                                                                                                                                                                                                                                                                                Ravsan V.M., Grebenjuk V.A., Koval A.P., Skorokhod A.S.,
Roberts C.T. Jr., Leroith D.;
"Isolation of a second nonallelic insulin-like growth factor I gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ulany-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
10-DEC-2001 (TrEMBLrel. 19, Last annotation update)
1NSULIN-LIKE GROWTH FACTOR I PRECURSOR (FRAGMENT).
0ncorhynchus kisutch (Coho salmon).
Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
                                                                                                Oncorhynchus keta (Chum salmon).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
                         01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
INSULIN-LIKE GROWTH FACTOR I.1 PRECURSOR (IGF-I.1) (SOMATOMEDIN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PERNIS, PRO0276; Insulin; 1.
PRINTS, PR00276; INSULINA.
PRODO276; INSULINA.
PRODO377; INSULINB.
PRODO378; INSULINB.
PROBO378; INSULINB.
PROSITE; PS00262; INSULIN; 1.
Insulin family; Growth factor; Plasma; Multigene family; Signal.
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0
                                                                                                                                                                                                                                                                                                                                                                      from the salmon genome.";
DNA cell Biol. 13:555-559(1994).
-!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM
ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INSULIN-LIKE GROWTH FACTOR I.1.
B.
C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MUCH HIGHER GROWTH-PROMOTING ACTIVITY.

-!- SUBCELLULAR LOCATION: SECRETED.

-!- SIMLARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

EMBL; AF063216; AAC18833.1; -.

HSSP; P01343; 1GF1.

InterPro; IPR000739; Insulin_IGF_relaxin.
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D. E. PEPTIDE.
BY SIMILARITY.
BY SIMILARITY.
T.: F4CEB6D05E0F24B8 CRC64;
T.1. DB 13; Lengt?
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01-AUG-1998 (TrEMBLrel. 07, Last sequence update) 01-DEC-2001 (TrEMBLrel. 19, Last annotation update
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            116 AA.
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                                                                                                                                                                                                                                                                           MEDLINE=94296559; PubMed=8024699;
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1114
188
92
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107
115
50
50
62
188 AA;
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Best Local Similarit<u>y</u>
Matches 68; Conserv
                                                                                                                                                                                                     NCBI_TaxID=8018
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X MEDLINE-9302477; PubMed=1406698;

X MEDLINE-9302477; PubMed=1406698;

A Duguay S.J, Park L.K., Samadpour M., Dickhoff W.W.;

Duguay S.J, Park L.K., Samadpour M., Dickhoff W.W.;

Mucleotide sequence and tissue distribution of three insulin-like

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TISSUE=LIVER;
MEDLINE=90190659; PubMed=2628735;
Cao Q.P. Duquay S.J. Plisetskaya E., Steiner D.F., Chan S.J.;
"Nucleotide sequence and growth hormone regulated expression of salmon insulin-like growth factor I mRNR.";
Mol. Endocrinol. 3:2005-2010(1989).
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60.1%; Score 360; DB 13; Length 116;
Best Local Similarity 65.1%; Pred. No. 6.3e-36;
Matches 69; Conservative 10; Mismatches 19; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18 POTENTIAL.
>88 INSULIN-LIKE GROWTH FACTOR
116
12697 MW; C5F378915179DB9D CRC64;
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19 >
116 1
116 AA;
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SEQUENCE
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61 CVRCKPTKSARSIRAQRHTDMPKTQKSQPLSTHKKRKLQRRRKGST 106

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